

Fall 1968

1968-1969 Xavier University College of Arts and Sciences, College of Business Administration, Evening College, Graduate School Course Catalog

Xavier University, Cincinnati, OH

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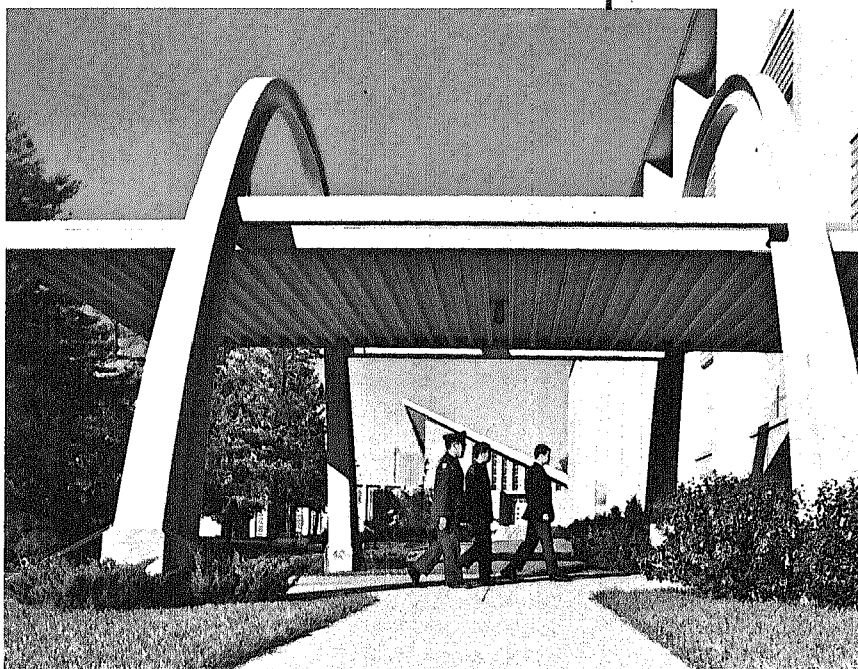
Catalogue 1968-1969

The College of Arts and Sciences

The College of Business Administration

The Evening College

The Graduate School



Suggestions for Obtaining Information

Requests for information should be directed to the officer indicated,
Xavier University, Victory Parkway, Cincinnati, Ohio 45207.
Telephone: 731-2341 (Area Code 513)

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Alumni affairs:

Executive Director, X. U. Alumni Association

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Bulletins and catalogues (graduate):

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Dean of the Evening College

For part time and after graduation placement:

Director of Placement

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or the Associate Dean, College of Business
Administration

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Refunds:

The Bursar

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Chairman of Student Health Service

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Transcripts and certificates of honorable dismissal:

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Tuition and payment of bills:

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Veterans' education:

Director of Veterans' Education

Xavier University

Operated by the Jesuit Fathers



Catalogue
1968 - 1969

The College of Arts and Sciences

- - Evanston Campus
- - Milford College

The College of Business Administration

The Evening College

The Graduate School

Victory Parkway, Cincinnati, Ohio 45207, (Area 513) 731-2341

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Information concerning the Evening College is included under programs of the College of Arts and Sciences and the College of Business Administration.

1968

JANUARY							MAY							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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7	8	9	10	11	12	13	5	6	7	8	9	10	11	8	9	10	11	12	13	14
14	15	16	17	18	19	20	12	13	14	15	16	17	18	15	16	17	18	19	20	21
21	22	23	24	25	26	27	19	20	21	22	23	24	25	22	23	24	25	26	27	28
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4	5	6	7	8	9	10	2	3	4	5	6	7	8	6	7	8	9	10	11	12
11	12	13	14	15	16	17	9	10	11	12	13	14	15	13	14	15	16	17	18	19
18	19	20	21	22	23	24	16	17	18	19	20	21	22	20	21	22	23	24	25	26
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MARCH							JULY							NOVEMBER						
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17	18	19	20	21	22	23	21	22	23	24	25	26	27	17	18	19	20	21	22	23
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28	29	30	25	26	27	28	29	30	31	29	30	31

University Calendar, 1968 - 1969

First Semester

SEPT. 17, TUESDAY	....	{ Out-of-town freshmen and transfer students report to Director of Housing, 9:00 A.M. - 5:00 P.M. Registration of local seniors (M-Z 9:00 - 10:15 A.M. (94 or more credit hours) A-L 10:15 - 11:30 A.M. Registration of local juniors (A-L 1:00 - 2:30 P.M. (63 to 93 credit hours) M-Z 2:30 - 3:30 P.M. Freshmen and transfer students' Orientation begins, 9:00 A.M. All new students, local and out-of-town, are required to attend Registration of local sophomores (M-Z 9:00 - 10:15 A.M. (30 to 62 credit hours) A-L 10:15 - 11:30 A.M. Registration of freshmen (less than 30 credit hours) alphabetically, as assigned during Orientation, 1:00 - 4:00 P.M.
SEPT. 18, WEDNESDAY	....	{
SEPT. 19, THURSDAY	....	{
SEPT. 20, FRIDAY	....	{
SEPT. 21, SATURDAY	....	{
SEPT. 23, MONDAY	....	{
SEPT. 24, TUESDAY	....	{
SEPT. 25, WEDNESDAY	..	{
OCT. 1, TUESDAY	....	{
OCT. 2, WEDNESDAY	....	{
OCT. 29, TUESDAY	....	{
NOV. 1, FRIDAY	....	{
NOV. 6, WEDNESDAY	....	{
NOV. 9, SATURDAY	....	{
NOV. 11, MONDAY	....	{
NOV. 12, TUESDAY	....	{
NOV. 27, WEDNESDAY	..	{
DEC. 2, MONDAY	....	{
DEC. 3, TUESDAY	....	{
DEC. 17, TUESDAY	....	{
DEC. 20, FRIDAY	{
DEC. 21, SATURDAY	{

1969

JANUARY							MAY							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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19	20	21	22	23	24	25	18	19	20	21	22	23	24	21	22	23	24	25	26	27
26	27	28	29	30	31	..	25	26	27	28	29	30	31	28	29	30
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FEBRUARY							JUNE							OCTOBER						
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16	17	18	19	20	21	22	22	23	24	25	26	27	28	19	20	21	22	23	24	25
23	24	25	26	27	28	..	29	30	26	27	28	29	30	31	..
..
MARCH							JULY							NOVEMBER						
..	1	1	2	3	4	5	1
2	3	4	5	6	7	8	6	7	8	9	10	11	12	2	3	4	5	6	7	8
9	10	11	12	13	14	15	13	14	15	16	17	18	19	9	10	11	12	13	14	15
16	17	18	19	20	21	22	20	21	22	23	24	25	26	16	17	18	19	20	21	22
23	24	25	26	27	28	29	27	28	29	30	31	23	24	25	26	27	28	29
30	31	30
..
APRIL							AUGUST							DECEMBER						
..	..	1	2	3	4	5	1	2	..	1	2	3	4	5	6
6	7	8	9	10	11	12	3	4	5	6	7	8	9	7	8	9	10	11	12	13
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27	28	29	30	24	25	26	27	28	29	30	28	29	30	31
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1969

- JAN. 6, MONDAY {Classes resume, 8:30 A.M., all colleges
Final date for withdrawal from courses
- JAN. 10, FRIDAY {Final date for submission of theses, first semester,
undergraduate day colleges
- JAN. 11, SATURDAY {Senior comprehensive examinations; M.Ed. and M.B.A.,
1:30 P.M.
- JAN. 20, MONDAY {Semester examinations, all colleges
through
- JAN. 25, SATURDAY {End of first semester, all colleges
- JAN. 27, MONDAY {First major retreat; open to all students
through
- JAN. 29, WEDNESDAY

Second Semester

- JAN. 30, THURSDAY {Registration of local seniors {A-L 9:00 - 10:15 A.M.
(94 or more credit hours) {M-Z 10:15 - 11:30 A.M.
Registration of local juniors {M-Z 1:00 - 2:30 P.M.
(63 to 93 credit hours) {A-L 2:30 - 3:30 P.M.
Registration, Graduate and Evening, 6:30 - 9:00 P.M.
- JAN. 31, FRIDAY {Registration of local sophomores {A-L 9:00 - 10:15 A.M.
(30 to 62 credit hours) {M-Z 10:15 - 11:30 A.M.
Registration of local freshmen {A-L 1:00 - 2:30 P.M.
(less than 30 credit hours) {M-Z 2:30 - 3:30 P.M.
Registration, Graduate and Evening, 6:30 - 9:00 P.M.
- FEB. 1, SATURDAY {Registration, Graduate and Evening, 9:00 A.M. -
3:00 P.M.
- FEB. 3, MONDAY {Registration of out-of-town undergraduate students,
9:00 - 11:15 A.M. and 1:00 - 4:00 P.M.
Registration, Graduate and Evening, 6:30 - 9:00 P.M.
- FEB. 4, TUESDAY {Instruction begins 8:30 A.M., all colleges
- FEB. 11, TUESDAY {Final day of late registration, undergraduate day
colleges
- MAR. 3, MONDAY {President's Day; no classes before 4:00 P.M.
- MAR. 11, TUESDAY {Final date for assignment of "W" in undergraduate day
colleges
- MAR. 19, WEDNESDAY {Final date for filing application for degrees to be granted
in June
- MAR. 22, SATURDAY {Graduate School, Foreign Language Examinations,
2:00 P.M.
- MAR. 25, TUESDAY {Mid-semester grades due, undergraduate day and even-
ing colleges
- APR. 2, WEDNESDAY {Easter recess begins after last class, all colleges
- APR. 3, THURSDAY {Second major retreat
through
- APR. 5, SATURDAY
- APR. 10, THURSDAY {Classes resume, Graduate and Evening colleges

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M.A., S.T.L. *Assistant University Chaplain*
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SCHOLARSHIPS. Fr. Besse, chairman; Mr. Brown, secretary; Fr. Brueggeman, Fr. Buschmann, Dr. Hayes, Mr. Mastrianna, Mr. Smith.

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STUDENT WELFARE. Fr. Ratterman, chairman; Mr. Ebacher, Fr. Fischer, Dr. Hanna, Mr. LaGrange, Fr. Prickril, Lt. Col. Sisak.

UNDERGRADUATE STUDIES ABROAD ADVISOR. Mr. Leonard.

Members of the Faculty—1967-1968

The year mentioned in parenthesis is the date of appointment.

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Instructor in Philosophy

ALBERT F. ANDERSON, B.S., M.Ed., Ed.D. (1963)
Associate Professor of Education

EDWARD J. ARLINGHAUS, B.B.A., M.B.A. (1960)
Associate Professor of Business Administration; Director, Graduate Program in Hospital Administration

ROBERT ASHMORE, Ph.B., Ph.L., Ph.D. (1966)
Assistant Professor of Philosophy

GUSTAVE K. BAHR, JR., B.S., M.S., Ph.D. (1965)
Lecturer in Physics

REV. RALPH BASTIAN, S.J., A.B., Ph.L., M.A., S.T.D. (1966)
Associate Professor of Theology

WILLIAM C. BECKER, B.S., M.Ed. (1967)
Lecturer in Communication Arts and Education

WALTER F. BEHLER, B.S. in B.A., M.B.A., C.P.A. (1949)
Associate Professor of Accounting

ALFRED BEIGEL, A.B., M.A., Ph.D. (1967)
Associate Professor of Modern Languages

ROBERT G. BENKERT, M.Ed. (1958)
Lecturer in Business Administration

REV. LEE J. BENNISH, S.J.,
Litt.B., Ph.L., S.T.L., M.A., Ph.D. (1967)
Assistant Professor of History and Political Science

HARVEY BERLIN, B.S., M.S., Ph.D. (1967)
Lecturer in Psychology

DAVID BESCO, B.S., M.S. (1967)
Lecturer in Mathematics

REV. CLIFFORD S. BESSE, S.J., A.B., Ph.D. (1952)
Professor of Economics; Assistant Dean, College of Arts and Sciences

VYTAUTAS J. BIELIAUSKAS, A.B., M.A., Ph.D. (1958)
Professor of Psychology; Chairman, Department of Psychology

KENNETH BISHOP, B.S., M.Ed. (1966)
Lecturer in Education

S/MAJ. GILBERT P. BLANKENSHIP (1963-1966; 1967)
Instructor in Military Science

GEORGE BOISVIN (1967)
Lecturer in Communication Arts

WILLIAM D. BOLSEN, B.Ed., M.Ed. (1966)
Lecturer in Education

JOSEPH E. BOURGEOIS, A.B., A.M., Ph.D. (1945)
Professor of Modern Languages; Chairman, Department of Modern Languages

DOROTHY BOWER, M.Ed. (1967)
Montessori Directress

REV. JAMES H. BOWMAN, S.J., A.M. (1967)
Instructor in English

REV. EDWARD A. BRADLEY, S.J., A.B., M.S. (1957)
Assistant Professor of Physics

MARGARET BRAUN, B.S., M.A. (1966)
Lecturer in Psychology

LEO C. BRENNAN, B.S., Ph.D. (1967)
Lecturer in Chemistry

MARTIN BROWN, A.B., M.S. (1966)
Lecturer in Mathematics

REV. EDWARD B. BRUEGGEMAN,
S.J., M.A., Ph.L., S.T.L., S.T.D. (1962)
Professor of Theology; Chairman, Department of Theology

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GLEN A. LAGRANGE, A.B., M.A. (1947)
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VERNON L. LAMBERT, E.E., M.S., M.B.A., Ph.D. (1967)
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DAVID A. LAYCOCK, B.S., M.S. (1966)
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JOSEPH LINK, JR., Ph.B., M.Ed., D.Ed., D.Sc. (Hon.) (1946)
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REV. MAURICE E. LINK, S.J., Litt.B., M.A. (1947)
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WALTER W. LIPPERT, JR., A.B., M.S., Ph.D. (1963)
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PAUL C. LUNSFORD, B.S. (1966)
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Adjunct Assistant Professor of Hospital Administration

JOHN A. TONTI, B.S.B.A. (1968)
Lecturer in Management

JOHN TOTTEN, M.S. (1967)
Lecturer in Mathematics

REV. HARKER E. TRACY, S.J., A.B., S.T.B., M.A. (1957)
Assistant Professor of Philosophy

REV. JOHN J. TRAINOR, S.J., M.A., Ph.L., S.T.L. (1959-1962; 1963)
Assistant Professor of Psychology

REV. JEROME F. TREACY, S.J., A.B., M.A. (1967)
Assistant Professor of Theology

ELMER TUDOR, B.S., M.B.A. (1967)
Lecturer in Business Administration

MATIAS G. VEGA, Ph.D. (1954)
Professor of Modern Languages

REV. LEO J. VOLLMAYER, S.J., A.B., M.S. (1942)
Professor of Physics

URBAN C. VON WAHLDE, S.J., A.B., M.A. (1966)
Instructor in Classical Languages

WESLEY P. VORDENBERG, A.B., M.A., Ph.D. (1965)
Associate Professor of Education

K. DUANE WAIT, B.S., M.S., Ph.D. (1967)
Lecturer in Mathematics

NED C. WEBB, A.B., Ph.D. (1965)
Lecturer in Chemistry

WILLIAM WEIMER, B.S. (1967)
Laboratory Teaching Assistant

KARL P. WENTERSDORF, M.A., Ph.D. (1956)
Professor of English

FREDERICK G. WERNER, A.B., M.A., Ph.D. (1960)
Professor of Physics

MAXWELL WERNER, B.S., M.Ed. (1965)
Adjunct Assistant Professor of Education

JOSEPH H. WESSLING, B.S., M.A. (1964)
Assistant Professor of English

REV. ORRIN T. WHEELER, S.J., Litt.B., Ph.L., S.T.L., S.T.D. (1958)
Assistant Professor of Theology; Associate Registrar

WILLIAM H. WILLER, A.B., M.A., Ph.D. (1946)
Professor of English

JAMES A. WILLIAMS, A.B., M.A. (1964)
Lecturer in Economics

RONALD L. WILSON, B.F.A. (1967)
Lecturer in Communication Arts

EDWARD F. WILZ, B.S.B.A., M.B.A., C.P.A. (1954)
Professor of Accounting; Chairman, Department of Accounting

*GEORGE A. WING, B.S.B.A., M.B.A., D.B.A. (1960)
*Associate Professor of Economics and Finance; Chairman,
Department of Economics and Finance*

ROBERT A. WOOD, B.S., M.Ed. (1967)
Lecturer in Communication Arts

REV. BERNARD J. WUELLNER, S.J., M.A., Ph.D. (1967)
Professor of Philosophy

*On leave, 1967-1969.

SISTER IGNATIUS MARIE WULFTANGE, S.N.D. de N., A.B., M.A.,
Ph.D. (1966)
Associate Professor of Education

COLIN YACKS, B.S., M.Ed. (1966)
Lecturer in Communication Arts

CHARLES ZIMMER, B.S., M.A. (1961)
Lecturer in Business Administration

OLEG ZINAM, B.S., M.B.A., Ph.D. (1958)
Lecturer in Modern Languages

Graduate Assistants

Chemistry

WILLIAM T. ENGEL, B.S.
RICHARD M. FUCHS, B.S.
PALANIAPPA GANDHI, B.S., M.S.
RICHARD J. GRANT, A.B.
ROBERT J. HOGAN, B.S.
DORIS KNECHT, A.B., B.S.

DONALD M. KULICH, B.S.
ROGER A. MADER, B.S.
CHARLES W. MILLER, B.S.
BERNARD J. SCHEVE, B.S.
JOSEPH B. SHEEHAN, B.S.
DANIEL R. SULLIVAN, A.B.

Computer Center

DENZEL HARDESTY, A.B., M.A.

English

JOSEPH F. ACITO, A.B.
EUGENE M. CASTILLON, H.A.B.
ROBERT W. DUNCAN, B.S.
DANIEL R. GARDNER, A.B.
THOMAS R. HELMICK, A.B.
STEPHEN R. HUDSON, A.B.

MICHAEL D. KAYNIS, A.B.
THOMAS KELLER, A.B.
THOMAS A. MEYER, A.B.
FRANK PHELAN, S.J., A.B.
SIDNEY J. VANCE, B.S.

History

JAMES R. BARRETT, B.S.
MARGUITA BERGMAN, A.B.
THOMAS J. CONWAY, JR., B.S.

CHARLES GILL, A.B.
RICHARD KOHLER, B.S.

Mathematics

JAMES COX, B.S.
J. KURT DEW, B.S.
RICHARD DIETZ, B.S.

JAMES MARATTA, B.S.
J. MICHAEL THIERAUF, B.S.
CAROL WELCH, B.S.

Physics

JAMES SULLIVAN, B.S.

Psychology

JOHN J. BLASE, B.S.
LAWRENCE CALHOUN, B.S.
WILLIAM EILERMAN, A.B.
JOSEPH HARTMAN, A.B.

CLARE R. KATHMAN, A.B.
LORRAINE PERLMUTTER, A.B.
GINTAUTAS SABATAITIS, S.J.,
A.B., S.T.D., M.A., Ph.L.
ROLAND J. SIITER, A.B.

The University

History

Xavier University was founded in 1831 as a literary institute by Edward Dominic Fenwick, of the Order of Preachers, who was the first Bishop of the Diocese of Cincinnati. He called his school The Athenaeum and erected buildings on Sycamore Street in downtown Cincinnati.

In 1840, his successor, Bishop John Baptist Purcell, invited the Jesuits to take over the administration of the school. They arrived on October 1, 1840, and began first classes on October 17. The Jesuits changed the name to Saint Xavier College. In 1919 the College moved to the present site on Victory Parkway in Evanston-Avondale. In 1930 the name was again changed, this time to Xavier University.

Objectives of Xavier University

Xavier University is an institution of higher learning set in the worldwide traditions of the Roman Catholic Church and the Jesuit Order and drawing upon the cultural heritage of the Ohio Valley. The teaching of the Church on the nature of man, his origin and destiny, and how he should use and develop his talent is central to the educational philosophy of the University. It subscribes to the expression of Pope Pius XI in his *Christian Education of Youth*, "The proper and immediate end of Christian education is to cooperate with divine grace in forming the true and perfect Christian. . . . The true Christian, product of Christian education, is the supernatural man who thinks, judges and acts constantly in accordance with right reason illuminated by the supernatural light of the example and teaching of Christ."

The University strives to foster conditions favorable for intellectual leadership. To this end it strives to impart a superior body of knowledge to its students and to help them acquire power to think clearly and penetratingly. The University wants its graduates to be literate, persons of good taste, frequent and familiar in the use of books, alert, and retentive of significant ideas. These ideals are promoted by curricular and co-curricular activities that contribute to the intellectual, the religious, the moral, and the physical enrichment of its students.

In seeking to fulfill its responsibilities, the University is guided by the principles of the *Ratio Studiorum*. This Jesuit code of liberal education, developed and revised through some four hundred years

of experience, stresses the liberally educative value of mathematics and the natural sciences to teach the student to reason about the material universe. It uses language and literature to bring him into contact with new habits of thought and expression to enrich the appreciation of his own culture. History and social studies broaden his knowledge of men and events, and lead to a deeper understanding of his own role in society. And philosophy and theology help integrate the entire program of studies by the insight they afford of the total reality of God's plan for the individual and for society.

Along with general education, the University provides for concentration in special areas of learning. To the extent consonant with its resources, Xavier University fosters scholarly investigation and creative ability so that its members may contribute to mankind's quest for the fullness of truth. Its philosophy of education shapes and directs the curricula and the educational methods of Xavier University. The various programs, those in the natural sciences, business administration and pre-professional education, no less than those in the humanities, give the student a core of required, broadly educative courses so that concentration on special objectives is carried on in the context of liberal education.

In fine, Xavier University regards the development of the intellectual abilities of its students in their pursuit of truth as its specific, primary responsibility. And it sees itself sharing with the Church, the family, and other social institutions the responsibility for developing the other characteristics of the "true and perfect Christian"—strong moral character, intelligent appreciation of beauty, sound physical health, and appropriate social attitudes and habits. Jesuit education thus prepares its students for eternity as well as for time; for life as well as for vocation.

The College of Arts and Sciences

The College of Arts and Sciences is the heart of the Jesuit system of education. The college holds this place because it is the unit of a university wherein the distinctive purposes of Jesuit education are more fully realized. The first two years of the College of Arts and Sciences are devoted almost wholly to general education; the last two years are devoted in great measure to advanced and specialized study in fields of knowledge upon which the student wishes to concentrate. During these last two years, however, each student must devote almost one-third of his work to the study of philosophy and Christian culture, which thus climax and integrate his general education.

The College of Business Administration

After operating its business departments for many years as a part of the College of Arts and Sciences, the University established the College of Business Administration on September 1, 1961.

The College of Business Administration conforms to the general principles and objectives of the University in particular, and of Jesuit education in general. It recognizes the indispensability of cultural subjects which motivate the higher powers of the mind and spell the difference between an educated man and a mere technician.

The objectives, therefore, of the College of Business Administration are twofold: 1. The development of the cultural, the intellectual, and the moral qualities of the student; 2. Adequate preparation in areas of business administration to help the student to a position of responsibility in the business world.

Evening College

The purpose of the Evening College is to aid adults of Greater Cincinnati in obtaining a more advanced education by means of courses of cultural and practical value. This division renders particular service to those who wish to carry college work toward a degree while working during the day and to those who wish to pursue subjects which will better fit them for special services or vocations.

In addition to the liberal arts courses, technical and vocational courses are offered. All courses are open to men and women. Besides the individual course offerings, there are groupings and programs of courses leading to certificates, diplomas, and degrees.

The Graduate School

The Graduate School has offered programs leading to graduate degrees since 1947. Degrees conferred are the Master of Arts, the Master of Science, the Master of Education, and the Master of Business Administration. Information about the Graduate School follows the undergraduate section of this Catalogue.

Milford College

Members of the Chicago Province of the Jesuit Order pursue humanistic studies at the Milford College, a unit of the University. The faculty and the courses offered at Milford are included in this catalogue.

Accreditation

The University is accredited by the North Central Association of Colleges and Secondary Schools as a degree-granting institution, and is approved by the Department of Education of the State of Ohio and by the Board of Regents of the University of the State of New York. It is also approved by the American Chemical Society for its training in chemistry.

Institutional Memberships

The University maintains membership in the following educational and learned organizations:

The Jesuit Educational Association; The National Catholic Educational Association; The North Central Association of Colleges and Secondary Schools; The North Central Conference of Summer School Directors; The National Association of College and University Summer Sessions; The American Council on Education; The Association of American Colleges; The Association of Urban Universities; The National Conference of Church-Related Colleges; The Mid-West Conference on Graduate Study and Research; The National Education Association; The Ohio College Association; The Association of University Evening Colleges; The American College Public Relations Association; The American Catholic Philosophical Association; The American Catholic Historical Society of Philadelphia; The American Historical Association; The United States Catholic Historical Society; The Mississippi Valley Historical Association; The Catholic Library Association; The American Library Association; The American Association of Collegiate Registrars; The Association of Ohio College Registrars; The National Association of Student Personnel Administrators; The American Association of Colleges for Teacher Education; The American Mathematical Society; The Association of College Unions; The National Association of College and University Food Services; The National Association of College Stores; and The United States Field Artillery Association; The American Political Science Association.

Buildings

The following buildings are used primarily for administration and classroom purposes:

Albers Hall, dedicated in 1929, is the gift of the late William H. Albers. It contains classrooms, laboratories, and offices of the staffs in biology and public relations.

The Karl J. Aller Classroom Building, dedicated in 1960 to honor the Archbishop of Cincinnati, contains all major academic administration offices, 32 classrooms, four seminar rooms, faculty and student lounges, and the Schott-Link studios for radio and closed circuit television. The Edward H. Kelley Lecture Hall seats 322 in theater-type chairs with movable tablet arms. The building is air-conditioned.

Alumni Hall, erected in 1920, is the gift of the alumni to the University on its diamond jubilee. It contains the Department of Physics, the Geoghegan Memorial Language Laboratory, classrooms, and offices.

The Armory, completed in 1949, houses classrooms, an auditorium, a drill hall, a rifle range, storage rooms, and garages.

Saint Barbara Hall, the former Melcher residence, acquired in August, 1947, is the headquarters of the Reserve Officers' Training Corps.

Boylan Hall commemorates the memory of the late Rev. Murtha J. Boylan, S.J., professor of psychology at Xavier for many years. It houses the Assistant to the President and faculty offices.

The Walter Seton Schmidt Building contains offices of the Treasurer and the Bursar, faculty offices, and classrooms.

The McDonald Memorial Library, completed in 1966, is the gift of the Walter A. and George McDonald Foundation in memory of Andrew J. and Mary McDonald. This air-conditioned building seats 700 students. The open shelves have a capacity of 350,000 volumes, and there is a closed stack area in the Schmidt Building for an additional 80,000 volumes. An enclosed garden area at the rear of the building provides space for future expansion of the building.

Thomas J. Logan Chemistry Building, erected in 1952-1953, is a modern science building. The second level contains the Albert D. Cash Memorial Room.

Residence halls include the following:

Brockman Hall, a campus residence for 300 men, was dedicated in May, 1955, to the memory of the Very Rev. Hubert F. Brockman, S.J., twenty-fourth president of the University.

Elet Hall, erected in 1924, was the first unit of the students' dormitories. It is a well-furnished student residence with accommodations for one hundred students in single and double rooms. It temporarily houses the Department of Psychology.

Hinkle Hall, the residence of the Jesuit faculty, was erected in 1920 by Mrs. Frederick Wallis Hinkle. It contains the Foss Memorial Chapel.

Husman Men's Residence Hall, erected in 1965, was made possible by a gift from Harry J. Husman in memory of his wife, Edna D. Husman. It provides living accommodations for 292 students in four-man suites and is entirely air-conditioned. It is the first building to be erected on the new North Campus.

Kuhlman Hall (1967), an air-conditioned high-rise residence for 432 students, stands across from the University Center on Ledge-wood Avenue. It honors the late Mr. and Mrs. George H. Kuhlman, and contains the Kappelhoff Chapel and the Griffin Memorial Room.

Marion Residence, acquired in 1942, is especially arranged for individual tutorial guidance of honor students. A special selection of students assures representation in all phases of co-curricular life. Students may live in Marion Hall only by special recommendation.

Rattermann Hall, located at Redway and Dakota Avenues north of the main campus, was bequeathed to Xavier by the late Mrs. Henry C. Rattermann. This large English style residence provides a limited number of rooms for out-of-town students and also houses

the Mermaid Tavern, the campus writers' club.

Other buildings of the University are:

The Field House and Gymnasium, erected in 1928, is the gift of Mr. Walter S. Schmidt, Class of 1905. In addition to the large indoor stadium, it contains a boxing ring, badminton and handball courts, a basketball court, and shower and locker rooms.

Xavier Stadium has a capacity of 15,000 and is floodlighted for night games. It was erected in 1928 through a public drive headed by the former Governor of Ohio, the late Myers Y. Cooper.

North Hall, 1947, contains offices of the Department of Classics, the superintendent of buildings and grounds, and the maintenance department.

South Hall, 1947.

The University Center, 1965, combines all dining and snack-bar facilities for resident and commuting students, student activity offices, the University Book Store, recreation facilities, a 500-seat theatre, and the offices of the President of the University, the Executive Vice-President, the Vice-President, Student Affairs; the Dean of Men, and the Director of Student Aid and Placement. Erected at a cost of more than \$2,000,000, the Center enjoys a commanding view of both Victory Parkway and the University Mall.

The Milford Novitiate Building, erected in 1925, on a one-hundred acre plot of ground in Milford, Ohio, houses members of the Society of Jesus in residence at the Milford Division of the University.

The Williams Memorial—St. Robert Bellarmine Chapel, dedicated on December 16, 1962, is the gift of the five children of the Charles F. Williams family in honor of their parents. The Chapel, a structurally unique building in Cincinnati, is sheltered by a saddle-shell roof of reinforced concrete resting on two massive concrete piers. The design was chosen to provide a maximum of clear floor space for a semi-circular seating arrangement to accommodate 500 worshippers. The Chapel is located at the head of the Mall, making it a feature of the inner campus.

Sycamore House adjoins Elet Hall and serves as headquarters for the University's Public Relations and Development staff.

The Joseph Center for Human Development (1968), Dana Avenue and Winding Way, houses the University's psychological services, counselling activities, and some classrooms.

The Mary Manning Walsh House, commemorating Mrs. Walsh's scholarship bequest to the University, houses some of the University's Business and Finance offices.

The Symmes Street Studios, used for radio and television instruction by the Department of Communication Arts, formerly were the headquarters of WCPO-TV and Radio.

The Keseg House, 3868 Ledge-wood Avenue, is used at present for activities of the Sodality.

University Services, Financial Aid, and Organizations

Religious Welfare

Xavier University uses various means of promoting a sincere Catholic way of living in its students. This influence permeates classroom and general campus atmosphere. From the celebration of Mass to a visit in Bellarmine Chapel, student life is vibrant with that simple devotion characteristic of Christian principles.

Student Retreat

Each year the Spiritual Exercises of Saint Ignatius Loyola are given for all Catholic students. Attendance at the exercises is obligatory for day undergraduates.

At the same time a series of conferences on morality, character formation, and the natural virtues are given to the non-Catholic students. In none of these conferences is there anything said to disturb the religious convictions of any individual exercitant. Attendance at these conferences is obligatory for day undergraduates.

Student Health Service

The Student Health Service is the organization through which the University fulfills its obligation to its students for the care of their physical and mental health and at the same time assures itself and the families of these students that a reasonable supervision is being exercised by the institution for the maintenance of physical and mental fitness of the student.

Participation in the Student Health Service is obligatory for day undergraduates. Evening and graduate students may use some of the services.

Health examinations are required of all day students as part of their entrance requirements to Xavier University. Forms for this examination are to be filled out by the family physician and must be in the hands of the medical director of the University before the beginning of the semester in which the applicant enters the University.

Student Guidance

The University strives to give students as much individual attention as possible. Each student is assigned a faculty advisor whose

duty it is to assist the student in the planning of his course. The student is expected to have at least one conference in each semester with the adviser.

For spiritual and personal guidance the University provides University Chaplains, who see all students according to schedule or by appointment.

Psychological Services Center

The Center provides psychological services for students of Xavier University. It is equipped to handle behavioral problems in a variety of areas such as the choice of studies, of a school, or of an occupation; measurement of aptitudes, interests, abilities, etc.; failures in school or at work; difficulties in reading and unsatisfactory patterns of living. Psychological testing and vocational guidance, psychiatric evaluation, counseling, and psychotherapy are the fundamental services of the Center. Undergraduate full-time students are provided the testing, counseling, and vocational guidance services free, except for a \$5.00 test materials' replacement charge.

The Placement Service

The Placement Service, located in the University Center, offers assistance to seniors, graduate students, and alumni in finding suitable employment commensurate with their education. The office provides occupational materials, placement guides, company literature, the College Placement Annual, other appropriate literature, and counseling service for those seeking career positions.

The Service arranges for representatives of companies and government agencies to interview students on campus, and aids as much as possible in arranging part-time and summer employment to meet the student's financial needs or to provide suitable work experience for his proper development.

Student Housing

Brockman Hall, Elet Hall, Husman Hall, Rattermann Hall, and Marion Residence are equipped to accommodate full-time day male students. Dormitory costs are listed under Fees.

Out-of-town students must live on campus. Exceptions to this regulation are granted by the Student Welfare Committee.

Room reservations for the residence halls will not be held through the summer for students who are on academic probation at the end of the preceding spring term.

University Services

Libraries

The University Library, housed in the Walter Seton Schmidt Library Building since 1926, was moved into the new McDonald Memorial Library during 1966.

The Library contains many interesting and valuable collections among which are the Williams Bible Collection; the original manuscripts of Francis J. Finn, S.J.; a fourteenth century vellum manuscript of the sermons of St. John Chrysostom; a fifteenth century antiphonary; several incunabula; letters of Andrew Jackson, Martin Van Buren, and others. Microfilm and microcard readers are available. The total number of volumes is 112,242.

The University has been a constant beneficiary of friends whose contributions have increased the number of volumes. Since 1925 the Booklovers Association has been outstanding in its gifts and contributions.

The Saint Thomas Library, a branch of the University Library, is situated in Milford. A great part of the 39,532 volumes is in the field of English and classical literature.

Art Gallery

The Fine Arts Gallery, located in the Carriage House of Marion Hall, is intended to be a living facility—one that will present works of art available to the University through loans, gifts, and travelling exhibitions. It was opened in the summer of 1966.

Laboratories

The Albers Biological Laboratory, located on the third floor of Albers Hall, is well equipped for the training of undergraduate students in the biological sciences. In addition to standard biological laboratories, optical equipment, slides, and specimens, the Department of Biology has abundant visual aids including models, a museum, a variety of projectors, and its own library of motion pictures and kodachromes. A library room of selected reference books and journals adjoins the laboratories. A dark room and photographic equipment are available for the taking of motion pictures and photomicrographs.

The faculty of the Department of Biology has been conducting research on the electrical activity of the nervous system of lower forms for which Grass and Rahm electroencephalographs, with accessory instruments, are available. Advanced students are given the opportunity of engaging in this program of research.

The Department of Physics has one large general physics laboratory, a newly designed laboratory for advanced physics at the junior level, a newly equipped atomic-nuclear physics laboratory for seniors,

University Services

an optics laboratory, an analog computer laboratory, and a complete machine shop.

The Experimental Psychology Laboratory, on the second floor of Albers Hall, possesses materials and scientific equipment for teaching experimental methods and techniques to undergraduate and graduate students. An animal research laboratory is maintained to provide subjects for the study and investigation of perception, learning, and motivation.

The seismology laboratory, used for research in seismology, at present uses some of the facilities of the physics laboratories in addition to office, library, and dark room in Fisher Lodge. For the purpose of advancing the science of seismology, Xavier University maintains a first class station and observatory. The station is located on a farm approximately 16 miles east of the University. It is equipped with three Benioff short-period seismographs that are kept in continuous operation. In addition, an instrument vault situated in the basement of the Schmidt Building is used for experimental purposes.

The chemistry laboratories are located in the Logan Chemistry Building. Five large laboratories are devoted to physical, organic, analytical, general inorganic chemistry, and graduate research. There are smaller laboratories for biochemistry, instrumental analysis, and radiochemistry.

The Department of Military Science is adequately equipped for the conduct of both field work and classroom instruction. Equipment available for practical exercises by ROTC students consists of individual hand weapons. Since Xavier's ROTC unit specializes in Field Artillery, several 105mm howitzers and their associated fire direction and survey equipment are on hand. In addition, the department has available various other items or models of military equipment for training in map reading, military communications, and military missiles. Indoor instruction is often augmented and facilitated by appropriate motion pictures, slides and other graphical training aids. Other facilities include a sixteen-point small bore firing range, a military affiliate radio station, and an indoor drill and training area in the Armory. In addition, selected seniors may participate in the Army Flight Training Program conducted at a civilian Flight Training School and administered by the Department of Military Science.

The Geoghegan Memorial Language Laboratory, which was given by Miss Marie Geoghegan as a memorial to her three brothers, William A. Geoghegan, Thomas M. Geoghegan, and J. Paul Geoghegan, is located on the second floor of Alumni Hall. Equipped with thirty booths and eleven program sources, it provides supplementary drill for students who are taking any one of the modern foreign languages.

Scholarships

Computer Center

The University *Computer Center*, located in the Walter Seton Schmidt Building, provides a complete range of services connected with the analysis and processing of data by means of an electronic computer. These services, available to all branches of the University, may be categorized as services meeting University needs in the areas of education, research, and administration.

General computer orientation is available to the student body in lectures and demonstration periods in the Computer Center. Students can write simple FORTRAN programs after this orientation. Interested students and faculty members receive further instruction in programming in seminars offered each semester by the Computer Center staff. Facilities of the Center are also employed as a course supplement by professors in various disciplines.

Faculty and student researchers are also provided analysis, programming, and operating services in support of their projects by the Center. The high speed and accuracy of the computer is invaluable to research involving complex and extended computations.

The Center assists the administrative offices of the University in processing data. The Treasurer's office, the Registrar's office, and the Development office particularly make extensive use of the services of the Center.

The Center has the following equipment to service the computer needs of the University:

- IBM 1620 Computer with card input-output and 20,000 digits of core storage
- IBM 1443 High Speed Printer
- Two IBM 1311 Disk Files with four million digits of memory storage
- IBM 407 Accounting Machine
- IBM 085 Collater
- IBM 514 Reproducing Punch
- IBM 548 Interpreter
- IBM 082 Sorter
- Four IBM 026 Key punches

SCHOLARSHIPS—FINANCIAL AID

Types of Aid

1. Scholarships.
2. Student Loans.
3. Government Educational Opportunity Grants.
4. The College Work-Study Program.
5. Part-Time Jobs.
6. Summer Employment.

Scholarships

Scholarships

Information on University scholarships is provided by the sources indicated upon request:

1. For Undergraduate, Day Division, Academic Scholarships: The Director of Placement and Student Aid.
2. For Honors Course Scholarships: The Director of the Honors Course.
3. For Evening College Scholarships: The Dean, Evening College.
4. For Graduate Scholarships: The Dean, Graduate School.
5. For Reserve Officer Training Corps Scholarships: The Professor of Military Science.
6. For Athletic Scholarships: The Director of Athletics.
7. For Band Scholarships: The Director, Xavier University Band.

The Procter and Gamble Scholarship

Xavier is one of the universities participating in the Procter and Gamble scholarship program. Each scholarship under this program covers up to full tuition for four years and an allowance for books, fees, and supplies, and is administered by the University. The stipend is determined in accordance with the Parents' confidential statement.

The General Motors Scholarship

Xavier participates in the General Motors College Scholarship Plan. The amount awarded under this plan ranges from an honorary award of \$200.00 up to an award of \$2,000.00 per year, depending upon the need of the individual. This scholarship is administered by the University.

Cincinnati Catholic High Schools

A scholarship is awarded annually to an outstanding student of the graduating class of each of the Catholic high schools for boys of Cincinnati on the recommendation of the principal. The value of the scholarship, which may amount to full tuition, is to be determined by each student's financial need. These are full tuition scholarships.

Jesuit High Schools

A scholarship is awarded annually to an outstanding student of the graduating class of each of the Jesuit high schools of the Chicago and the Detroit provinces on the recommendation of the principal. The value of the scholarship, which may amount to full tuition, is to be determined by each student's financial need. These are full tuition scholarships.

Honors Course Scholarships

Scholarships for study in the Honors Course are offered to students who have maintained an excellent academic standing in

Scholarships

high school. Four years of high school Latin are a prerequisite. The number of freshmen in this course is limited. For this reason the funds set aside for scholarships are normally adequate to provide partial or full tuition and, in some cases, help beyond tuition to a deserving student. The amount of the scholarship is determined partly by the academic record and partly by the real need of the applicant.

ROTC Scholarships

The Department of the Army annually awards two-year and four-year ROTC scholarships to outstanding students. Applications for the four-year scholarships must be made through the Army area HQ in the area of the student's residence. For additional information, contact a high school guidance counselor. Two-year scholarships are awarded to outstanding members of the Xavier University sophomore ROTC class and number three or four per year. Both types of scholarships cover the costs of books, tuition, and fees, and carry a \$50.00 monetary allowance. See the Military Science section of this Catalog for additional information.

Members of the advanced course receive an allowance of \$40.00 per month.

Competitive Scholarships for Greater Cincinnati

A minimum of twelve scholarships, which may amount to half-tuition, are awarded to graduates of high schools in the Greater Cincinnati area. The Greater Cincinnati area includes Hamilton, Butler, Clermont, and Warren counties of Ohio; Boone, Campbell, and Kenton counties of Kentucky; and Dearborn county of Indiana. These scholarships are awarded at the discretion of the Committee on Scholarships at Xavier University on the basis of scholastic excellence and financial need.

Competitive Scholarships Outside Greater Cincinnati

A minimum of twelve scholarships, which may amount to half-tuition, are awarded to graduates of high schools outside the Greater Cincinnati area. The scholarships are awarded at the discretion of the Committee on Scholarships at Xavier University on the basis of scholastic excellence and financial need.

Instructions for All Applicants

Applicants for scholarships shall have completed all the requirements for admission to the University before being considered for a scholarship. Moreover, they must submit a Parents' Confidential Statement. This should be done by March 1.

Scholarships

Scholarship Regulations

1. A scholarship applies to tuition only and does not excuse the designee or holder from payment of other fees.
2. Scholarships must be accepted for the year or years they are awarded. They may not be transferred by the holder and may not be resumed at will after having been relinquished.
3. The scholarship will be awarded for one year and will be renewable in favor of the holder for each successive semester of his four-year college period.
4. Holders of honor scholarships must maintain a quality-point ratio of at least 2.5 in the freshman year, and 3.0 in the sophomore, junior, and senior years.
5. The award in all cases is made at the discretion of the Scholarship Committee of Xavier University.
6. Holders of honor scholarships are expected to participate in the co-curricular activities of the University.

Source of Scholarship Funds

The permanent scholarships that have been generously given to Xavier University in the past are listed below. Income from these scholarships is increased each year by gifts of annual scholarships. In addition, the University uses funds from its current income to make up the balance of these awards.

Perpetual Scholarships

William F. Poland, S.J., Fund, about 1906, approximately \$115,000

Fr. Poland established this fund from his patrimony at the time of the death of his parents.

Elizabeth Sullivan Scholarship, 1924, \$3,000

Mary B. Shannon Scholarship Fund, 1925, \$13,334

Worpenberg Family Scholarship, \$5,000

This is a partial scholarship to be awarded preferably to a graduate of Saint Xavier High School.

Rev. James D. Foley, S.J., Scholarship, (in his honor) \$2,000

Mary Mohlenhoff Scholarship, (in memory), \$2,000

Passion Play Scholarship, 1928, \$500

The Ryan Sisters Scholarship, \$3,000

Siedenberg-King Scholarship, \$2,000

Scholarships

Margaret Shea Scholarship, 1937, \$3,500

Archbishop McNicholas Memorial Scholarship, 1940, \$5,000

Mrs. F. W. Hinkle Memorial Scholarship, 1940, \$5,000

The Ryan Sisters Memorial Scholarship, 1940, \$5,000

Saint Xavier Church Memorial Scholarship, 1940, \$5,000

The four preceding scholarships were given on the occasion of the Quadricentennial Observance of the foundation of the Society of Jesus and the Centennial of the Jesuits in Cincinnati.

Rev. James McCarthy, S.J., Scholarship, 1942, \$3,468

This partial scholarship is to be given to a needy and deserving student in honor of Fr. James McCarthy, S.J. It was donated by the will of Mrs. Clara Pressler.

Xavier Student Council, 1942, \$2,087.47

The proceeds from a World War II metal scrap drive conducted by the Student Council were donated for this scholarship.

Bernard H. Ludwig Scholarship, 1948, \$2,000

A partial scholarship to be given preferably to some member of Saint Augustine's Parish, to be selected by the pastor of Saint Augustine's, Cincinnati.

Charles A. Clasgens Scholarship, 1949, \$3,576

A partial scholarship for any worthy poor student, preference to be given to a student of Saint Peter's Roman Catholic School, New Richmond, Ohio.

Blessed Virgin Mary Scholarship, \$5,000

A partial scholarship established by an anonymous donor in honor of the Blessed Virgin Mary.

Rev. Albert Dierkes, S.J., Scholarship, \$6,400

A partial scholarship established by an anonymous donor in memory of Fr. Dierkes.

Fred Tuke Scholarship, 1951, \$10,000

A donation by Mr. Fred Tuke provided a full tuition scholarship.

Walter A. and George McDonald Fund

This fund, established in 1960 to honor Mr. and Mrs. Andrew J. McDonald, provides income for a graduate assistant in the Department of Chemistry.

Walter A. and George McDonald Scholarship, \$1,000.

Scholarships

Dr. Edward McGrath Scholarship, 1956

A partial scholarship donated in memory of Dr. McGrath.

Lillian W. Ochs, \$250

Class of 1931 Scholarship, 1956, \$7,500

A half-tuition scholarship donated by the Class of 1931 on the occasion of the twenty-fifth anniversary of their graduation.

The Stephens L. and Margaret J. Blakely Scholarship, 1958

A tuition scholarship maintained by the annual contribution of Mr. John R. Blakely and Mrs. Jane B. Woodrough in honor of their parents. The scholarship is awarded to a pre-law student from Kenton County, Kentucky.

The Richard A. Jones Journalism Scholarship, 1960, \$19,161.83.

A bequest from the estate of Mrs. Alma J. Snodgrass to the Evening College in memory of her father, Cincinnati newspaperman.

The Jesse K. Dunn Memorial Scholarship Fund, 1959, \$7,000

The Frederick A. Hauck Physics Research Scholarship, 1962, \$1,500 annually

This is an award to a student (or students) selected by the Department of Physics to pursue, on the undergraduate level, research projects commensurate with his (or their) intellectual promise.

The Matthew Ryan Family Scholarship, 1964, \$10,000

Given at the request of the late Miss Margaret Ryan.

The Fredin Memorial Scholarships, 1964.

These are annual awards for one or more students to pursue their studies in French in France. Established from the bequest of Mlle. Aline Fredin in memory of her parents.

The Mr. and Mrs. Theodore H. Oppenheim Scholarship Fund, 1966.

A scholarship to be awarded at the discretion of the Scholarship Committee.

The Cincinnati Gas & Electric Scholarship, 1966:

This annual scholarship provides full-tuition and fees for a student in his freshman year and half-tuition and fees in his remaining three years of college. The company will refund tuition costs not initially covered if the scholarship recipient accepts postgraduate employment with the company. The scholarship is restricted to a student who enrolls in the College of Business Administration and who either resides in, or attended, a high school in the Company's service area or who is the son or daughter of a C. G. & E. employee.

The Wilson J. (Woody) Sander Memorial Scholarship Fund, 1967, \$15,700.

Financial Aid

This Scholarship Fund honors the memory of the late Mr. Sander, '34, whose service to his Alma Mater included chairmanships of the Athletic Board and the Alumni Living Endowment Fund.

FINANCIAL AID**Financial Assistance to Upperclassmen**

Full-time students who have been on the Dean's list for three succeeding semesters are eligible to apply for financial assistance. Applications should be submitted to the Director of Placement and Student Aid, Xavier University, no later than April 1. Applicants are required to provide a Parent's Confidential Statement.

The Chaswil Foundation Student Loan Fund

The Chaswil Foundation Student Loan Fund has been established by the late Sir Charles F. Williams to assist students in the undergraduate division. Students enrolled in the undergraduate day division of Xavier University are eligible to apply for loans after the completion of their first semester. In any one calendar year, a student can borrow up to one-half of his tuition and fees, or \$200.00, whichever is less. The loan is interest free. The recipient will be required to pay back a minimum of \$200.00 of the total amount borrowed, during each calendar year after he leaves Xavier University, whether by graduation or for any other reason.

The Lichter Foundation Loan Fund

The Lichter Foundation Loan Fund was established in 1955 through the generosity of Mr. Jacob Lichter of Cincinnati. Students enrolled in any division of Xavier University are eligible to apply for a loan after the completion of their first semester. The maximum to be borrowed in a particular case will be determined by the Committee on Scholarships. The recipient of a loan will be expected to pay back the money at his earliest convenience. The notes will begin to bear interest at the rate of 3% per annum, payable semi annually, one year after the recipient leaves Xavier University whether by graduation or for any other reason.

Government Loan Fund

The National Defense Education Act of 1958 provides for the creation, at American colleges and universities, of loan funds from which needy undergraduate and graduate students may borrow for the completion of their higher education. Recipients are selected by the school itself.

The borrower must be a full-time or half-time student, in need of financial aid for his education, and capable of maintaining good

academic standing. An undergraduate may borrow up to \$1,000.00 in one year but not over \$5,000.00 in his entire course of higher education. A graduate student may borrow, on the same basis and on the same repayment plans as the undergraduate, up to \$2,500.00 per year but not to exceed a total of \$10,000.00, including any undergraduate loans he may have incurred.

Repayments begin on a monthly or quarterly basis as determined by the University within nine months after the borrower ceases to be a full-time or half-time student. These loans carry a 3 percent interest on the unpaid balance during the repayment period. The loan must be repaid in accord with the terms specified in the promissory note. Under no conditions may the repayment period exceed ten years. The Act as amended requires that special consideration be given to superior students. For further details, communicate with the Director of Placement and Student Aid, Xavier University.

The Tuition Plan

The Tuition Plan is a convenient way to meet tuition and fees through monthly payments. Under this system, payments are spread out over eight monthly instalments if the contract is for one academic year's expenses, or over the entire year if the contract is for two, three, or four years' schooling. Any qualified parent under 60 years of age who uses the two, three, or four year plan is covered automatically by Parent Life Insurance, at no additional expense. The insurance provides for the payment of the remaining costs covered by the contract, upon the death of the parent who signed the contract.

Cost:

- One year plan —4% more than the cash price of tuition and fees for one year.
- Two year plan —5% more than the cash price of tuition and fees for two years.
- Three year plan—6% more than the cash price of tuition and fees for three years.
- Four year plan —6% more than the cash price of tuition and fees for four years.

For details on the Tuition Plan write: Treasurer's Office, Xavier University, Cincinnati, Ohio 45207.

Education Funds Incorporated

Education Funds Incorporated offers a convenient way to meet the cost of tuition and fees through monthly payments. Both parent

and student are covered automatically by life insurance, which provides for the payment of the remaining cost covered by the contract in the event of the death or permanent disability of the parent, or repayment of the contract in the event of the death of the student. Interest rates are reasonable.

Payment plans:

One year plan covers tuition and fees for one year, payable in eight or twelve monthly installments.

Two year plan covers two years' expenses—24 monthly payments.

Three year plan covers three years' expenses—36 monthly payments.

Four year plan covers four years' expenses—40 or 48 monthly payments.

For details, communicate with the Treasurer's Office, Xavier University.

The College Work-Study Program

In the Economic Opportunity Act of 1964, Government funds are made available to colleges and universities for part-time work, usually on campus. Applicants should be nationals (citizens) in need of the earnings to meet their college expenses, should have good academic standing, and should carry a normal (full-time) number of academic course hours. Under this program students may work up to 15 hours per week when their classes are in session and not more than 40 hours per week in vacation periods or during the summer when not enrolled in classes. Whenever possible, Work-Study jobs will be co-aligned with the student's course of studies to give the most valuable educational experience.

Xavier University participates in this program. For details communicate with the Director of Placement and Student Aid, Xavier University.

Educational Opportunity Grants

The Higher Education Act of 1965 provides funds through the United States Office of Education to Xavier University for making grants of from \$200 to \$800 a year to worthy undergraduate students in exceptional financial need. Grants are renewable for four years. The amount awarded to a student must be matched by some other type of financial aid provided either by the University, an outside scholarship, or other source.

After the first year an additional \$200 a year may be granted students who are in the upper half of their class.

Further information may be obtained from the Director of Placement and Student Aid, Xavier University.

Awards

Awards

The American Institute of Chemists' Medal. A gold medal is awarded to a senior majoring in chemistry for outstanding scholarship.

The Benjamin Bernstein Award. This award of \$100, offered by Mr. Benjamin Bernstein, partner of Touche, Ross, Baily, and Smart, is given to a student majoring in accounting who indicates aptitude in public accounting and whose scholarship in accounting and in over-all average is highest at the completion of his junior year.

The Cincinnati Chapter, National Association of Accountants Manuscript Writing Awards. These awards of \$25, \$15, and \$10 are granted students submitting the best manuscripts on subjects of working interest to the accountant in industry.

The Ervin A. Stadler Accounting Award. An award of \$100 is offered by Mr. Ervin A. Stadler, resident partner of Haskins and Sells, to the student majoring in accounting who attains the highest cumulative average in scholarship and accounting at the completion of his sophomore year and is a member of the Accounting Society.

The Haskins and Sells Foundation Scholarship Award. The Haskins and Sells Foundation has established an annual award of \$500 for the senior with an aptitude for public accounting and with the highest cumulative average in scholarship, accounting, and English at the completion of his junior year.

Financial Executives Institute, Cincinnati Chapter, Award. The sum of \$50 is given to the senior majoring in accounting whose scholastic standing, leadership, and participation in co-curricular activities are exceptional.

The Cincinnati Controllers Institute of America, Inc. Award. A plaque is awarded at the annual educational meeting to a senior majoring in accounting. The student is selected on scholastic standing, leadership, and participation in co-curricular activities.

The Dr. J. T. Clear Biology Key. This key, founded by Dr. J. T. Clear, is awarded annually to the member of the Xavier Biological Society who has completed his major in the Department of Biology with the highest distinction.

The Dorst Chemistry Key. This key, the gift of Arno A. Dorst, is awarded annually to the senior who has completed his major in the Department of Chemistry with the highest distinction.

The Arno Dorst Cash Award. This prize was established in 1958 in memory of the Cincinnati business and civic leader by the Honorable Edwin G. Becker. The award of \$200 will be made to a

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senior in Business Administration whose scholarship, co-curricular activities, and personal attributes indicate promise of leadership in business.

Craig Menderson Memorial Economics Award. This award of a gold key and \$50 was established in 1966 in memory of fifteen-year old Craig W. Menderson. It is given to the senior in economics who best demonstrates intellect, maturity, integrity, spirituality, and personality.

The Intercollegiate English Prize. A purse of \$100 is offered yearly by Mr. David F. Bremmer of Chicago for excellence in English essay writing. The competition includes the Jesuit colleges and universities of the Chicago, Missouri, Detroit, and Wisconsin Provinces.

The Alumnae English Prize. This prize is given by the Xavier University Alumnae Association to the student winning the highest place in the Intercollegiate English Contest.

The Sweeney English Award. A cash prize of \$25.00 is given in memory of Thomas and Anthony Sweeney to the student completing his major in English with the highest distinction.

The Mermaid Tavern Prize Key. A gold key is offered by Mr. Anthony C. Elsaesser, '12, to the Tavern member meriting highest distinction in literary composition and criticism. Mr. Elsaesser has established an endowment to provide for this key in perpetuity.

The Catholic Poetry Society of America Award. This award is given for an original poem judged superior by the Department of English.

Athenaeum Prize Keys. Two gold keys are given to authors of the best contributions by undergraduate students to the *Athenaeum* literary magazine as judged by members of the Department of English.

Xavier Fourragere. This military decoration is presented to ROTC students as an honor for military attainment.

The American Marketing Association Award, Cincinnati Chapter. An award of memberships and subscriptions valued at \$25.00 is made to the senior who has been outstanding in the study of marketing.

NFBA Foundation, Inc. Scholarship. The National Food Brokers Association annual award of \$400 is given to a junior or senior majoring in marketing. It is presented to a student interested in making a career in the food industry.

The Kramer-Miller Mathematics Award. An award of \$50 is made to the senior majoring in mathematics who has distinguished himself in his studies and has shown the greatest progress in mathematics.

The Mathematics Department—Pi Mu Epsilon Award. An award of \$20 presented by the Mathematics Department and the Ohio Theta Chapter of Pi Mu Epsilon, national honorary mathe-

Awards

matics fraternity, to the student in mathematics exhibiting excellence in problem competition sponsored by the Department.

The Military Order of World Wars Medal. The Cincinnati Chapter of The Military Order of World Wars presents a gold medal annually to the outstanding ROTC cadet of the First Year Basic Course.

The Reserve Officers Association of the United States, Cincinnati Chapter. Four medals are presented annually by this association to cadets of the ROTC. A gold medal is awarded to the outstanding cadet in the Second Year Advanced Course and a silver medal to the outstanding cadet of the First Year Advanced Course. Similar bronze medals are awarded to cadets of the First and Second Year Basic Course for excellence in scholarship and proficiency as cadets.

The Xavier University R.O.T.C Rifle Club Award.

The Disabled American Veterans' National Headquarters Award.

The Hamilton County Chapter of Catholic War Veterans' Award.

The Combined Councils, Knights of Columbus Award.

The Cincinnati Chapter of the Sons of the American Revolution Award.

The Association of the United States Army Medal.

The ROTC Bandsman Award.

The American Legion, Fourth District Award.

The Cincinnati Post and Times-Star Award.

The Veterans of Foreign Wars Award.

The Colonel Charles F. Williams' Scholarship and Prize. A gold medal and a \$200 scholarship are offered annually in memory of Colonel Charles F. Williams to the First Year Advanced Course student who ranks highest in scholarship.

The German-American Citizens' League Award. An award of \$25.00 is offered by the American Citizens' League of Cincinnati to the student who attains the highest scholastic average in German for the academic year.

The Heidelberg Club German Award. A gold medal is given to the student in the upper division courses who attains the highest score in a test in German administered by the Department of Modern Languages.

The Francis I. Hamel Prize in Psychology. A book prize established by Dr. and Mrs. Ignatius A. Hamel in memory of their son, Francis I. Hamel, is awarded to a junior majoring or minoring in psychology who has demonstrated excellence in achievement in psychology and who is outstanding in his over-all academic work.

Awards

The Frederick A. Hauck Physics Research Awards. A fund of \$1,500 provided annually by Mr. Frederick A. Hauck for research scholarships for undergraduates majoring in physics.

The Mrs. Magdalena Strobl Link Psychology Award. An award of \$50.00 established by Dr. Joseph Link, Jr., in memory of his mother, Magdalena Strobl Link, is given to the best graduating psychology senior. The recipient is selected by the Department of Psychology on the basis of his over-all performance, his performance in psychology, and his achievement on the Graduate Record Examination or the Miller Analogies Test.

The Alpha Sigma Nu Religion Key. A gold key is awarded annually by the Xavier Chapter of the National Jesuit Honor Society to the freshman or sophomore who writes the best essay on a religious topic.

The Intercollegiate Latin Prize. The Very Reverend Provincials of the Midwest Jesuit Provinces offer \$100 annually (\$50 for the first prize, \$30 for the second, and \$20 for the third) for the best translation of classical English and classical Latin. The contest is open to students of the Jesuit liberal arts colleges in the Chicago, Missouri, Detroit, and Wisconsin Provinces.

The Ragland Latin Medal. A gold medal, founded in 1935, in memory of Alice D. Ragland, is awarded to the participant who ranks highest in the Intercollegiate Latin Contest.

The Washington Oratorical Medal. A gold medal is offered by the Xavier University Alumni Association for the best original oration delivered in the annual contests in oratory.

The Joseph A. Verkamp Prize Award for the Study of Greek. To encourage the study of Greek, Mr. Joseph A. Verkamp, '07, founded in 1964 an annual award of a Greek Lexicon to the student who excels in Greek in the judgment of the Department of Classics.

The Joseph B. Verkamp Medal. A gold medal is established by Mr. Joseph B. Verkamp, '77, for award to the member of the Poland Philopedian Society who has delivered the best speech in the annual public debate of the society.

The Tau Kappa Alpha—National Honorary Society Speech Fraternity Keys. The Delta Sigma Rho-Tau Kappa Alpha Keys are awarded to students selected as members of the National Honorary Forensic Fraternity for their excellence in debate.

The Robert G. McGraw History Medal. This award is made to the student judged by the Department of History to excel in the study of history.

The Gasiewicz Political Science Medal. This medal is awarded to the junior who has made the greatest progress in and contribution to the field of political science.

Awards

The Archbishop McNicholas Medal. A gold medal is offered in memory of the Most Reverend John T. McNicholas, O.P., D.D., to that member of the senior class who has excelled in the study of philosophy.

The Martin G. Dumler Key. A key is offered by Mr. Martin G. Dumler, LL.D., to that member of the junior class who has excelled in the study of philosophy.

The David Snyder Religion Medal. A gold medal, founded by Mr. and Mrs. John W. Snyder, Portsmouth, Ohio, in memory of their son, David William Snyder, '31, is awarded for the best catechetical essay written by a junior or senior.

The Religion Key. An award offered by the University Sodality to the student who excels in the subject of Theology.

The James D. Shouse Award. An award of \$200, sponsored by the Avco Broadcasting Corporation, is given annually to a senior for the best academic and co-curricular achievement in the broadcasting arts. The winner's name is also inscribed on a permanent plaque in the Communication Arts Department office.

The J. D. Cloud Accounting Award. This prize of \$100.00 is awarded to the student of the Evening College in the senior accounting class attaining the highest average for his third and fourth years' work.

The Accounting Award of the Cincinnati Chapter, American Society of Women Accountants. This award of \$25.00 is granted to a woman student in the Evening College for excellence in the study of accounting.

Student Government

The purpose of student government at Xavier University is educational. Its goal is twofold: first, to develop a sense of individual and group responsibility for common ideals, and, secondly, to demonstrate through actual living experience the techniques of attaining those goals through group self-organization and self-government.

Student Organizations

Xavier University provides many forms of student activities and organizations for the purpose of promoting religious, social, academic, and cultural relations among the student body. All organizations of students are under the general supervision of the Student Welfare Committee. Approval for meetings and programs must be secured from them directly or through the appointed faculty moderators. With the exception of activities and organizations of a purely religious nature only such students as are free from disciplinary censure and the scholastic censure of probation are eligible for active membership. The University reserves the right to discontinue or moderate any

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student activity or organization. By means of its committees and agencies the University also has the right to limit the extent and degree of the individual student's participation.

Religious Activity

Sodality of the Immaculate Conception. The sodality was established and affiliated to the *First Sodality* in Rome on December 8, 1841. Its purpose is to promote a special and filial devotion to the Immaculate Mother of God, to imitate her virtues, and to encourage, both by word and example, an eminent purity of morals and a manly fidelity to the practices of religion. A residence for sodalists is maintained at 776 North Crescent Avenue.

Academic-Cultural Groups

The organizations that further the students' academic and cultural development are these:

The Xavier Accounting Society, organized in 1947, has as its prime objectives the broadening of knowledge and the deepening of interest of its members in the field of accounting; the promotion of mutual helpfulness and the fostering of fellowship in the pursuit of this worthy aim.

The Alchemysts Club, a student affiliate chapter of the American Chemical Society, furthers students' interest in chemistry. Together with the chemistry clubs of other Catholic colleges of Greater Cincinnati, it forms the Albertus Magnus Chemistry Club.

The Musketeer Band. The band promotes student interest in music, stimulates spirit at football and basketball games, gives concerts, and provides music for R.O.T.C. Corps Day formations and special University functions.

The Biology Club, open to students of biology, sponsors original investigation in the field.

The Xavier University Clef Club makes numerous concert appearances, entertains at University functions, and makes several radio broadcasts throughout the year. Two hours each week are given to vocal culture and the study of musical theory and interpretation.

Economics Club. Undergraduates interested in economics have banded together for further discussion of this subject.

The French Club, le cercle Francais de Xavier promotes interest in French affairs and in the history, the literature, the art, and the customs of France.

The Heidelberg Club fosters an interest in the history, culture, and language of the Germanic people.

The Investment Club has limited membership and is designed to

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promote an understanding of security selection and investment management. Members regularly commit monthly dues to the purchase of securities.

The Jazz Club presents jazz programs on campus and on the University and other radio stations.

The Xavier University Marketing Club. This organization, founded in 1963, supplements the students' classroom activity by inviting outside speakers and by orienting the members toward opportunities in the field.

The Masque Society of Xavier University stages plays during the academic year, and affords its members an opportunity to take part in phases of play production—acting, directing, stagecraft, lighting, and scenic design.

The Mathematics Club promotes scholarly development by interesting its members in pure and applied mathematics.

The Mermaid Tavern is a writers' club of limited membership and promotes the association of graduates and undergraduates actively interested in writing. *The Tavernacular*, a privately circulated magazine, is issued quarterly.

Pershing Rifles: Company G-1, a member of *The National Society of Pershing Rifles*, is a voluntary association of college students enrolled in basic courses in military science. Its purpose is to encourage, preserve, and develop the highest ideals of the military profession and to promote American citizenship. Company G-1 competes against drill teams from other universities at drill meets held at various locations in this part of the country. The company drills intensively and has developed a noteworthy *esprit de corps*. Elected Pershing Rifles members of the Advanced Course command the unit and administer its affairs. Any Basic Course student capable of passing certain tests is eligible for membership in the Pershing Rifles. Members wear the blue and white fourragere on the left shoulder of their R.O.T.C. uniforms.

The Xavier Philosophy Club fosters in its members greater interest in philosophical subjects. Meetings are informal and free discussion is encouraged.

The Poland Philopedian Society, the oldest campus organization, was founded in 1840. Besides regular intercollegiate debates, it sponsors the annual Robert S. Marx Debate Tournament, which brings teams from twenty-three colleges and universities to a competition at Xavier.

The Political Forum. Members participate as Young Democrats and Young Republicans, and invite governmental figures to discuss theoretical and practical politics.

The Psychology Club provides opportunity for students to

Undergraduate Organizations

increase their knowledge of psychology and to participate in extra-curricular work in this field.

The Society for the Advancement of Management. The University Chapter prepares Xavier men for business careers through seminars, conferences, and management development programs.

The Spanish Club encourages its members to learn more about the Iberian language and customs and the literature of Hispanic countries.

The St. Thomas More Pre-Law Society was founded in 1963 by the Xavier University Pre-Legal Committee for students interested in a career in the legal profession. Its program affords its members, in addition to the guidance of the Pre-Legal Committee, the counsel also of law school deans, professors, and students, of members of the local judiciary and bar, and especially of members of the Natural Law Society.

Student Volunteer Services, organized in 1965, involve students in volunteer projects at the local level and in such organizations as the Peace Corps, the Papal Volunteers, Extension, and VISTA. The organization works closely with Chabanel House. Projects include tutoring, direction of recreation, trips to Appalachia, and other activities of social and civic significance.

WCXU, the Xavier radio station, presents music, news, and sports sixty hours a week from its studio in the Alter Building. The Student Council owns the station, and students in Communication Arts staff it. It operates on 660 k.c.

Social and Service Clubs

Other organizations that afford students the opportunity for recreation and useful activity include the following:

The Xavier University Bridge Club was organized in 1959 under a franchise from The American Contract Bridge League. Its activities include monthly duplicate tournaments, invitational tournaments with other schools, and the sponsorship of bridge classes.

The Cheerleaders organize cheering at games and rallies.

The Dormitory Council consists of representatives of residents of the University halls, and promotes the spiritual and social welfare of the dormitory students.

The Xavier ROTC Radio Club maintains a station operating in the amateur bands and as part of MARS—the Military Affiliate Radio System. Students receive instruction necessary for earning operators' licenses.

The ROTC Rifle and Pistol Club practices marksmanship under the direction of a member of the Department of Military Science. The teams participate in intercollegiate competition, varsity and

Undergraduate Organizations

ROTC competition as members of the Ohio-Kentucky Rifle League, The Ohio ROTC Rifle League, and The Midwest Pistol League.

The Sailing Club participates in intercollegiate regattas as a member of the Midwest Collegiate Sailing Association. Its home port is Lake Cowan.

The Student Directory is compiled annually by undergraduates working under the direction of the Dean of Men.

The Xavier University Council of the Knights of Columbus (No. 4509) was established, and its first class was initiated in February, 1958. The Council maintains a residence for out-of-town members.

Regional Clubs

To promote fellowship among dormitory students the University encourages regional clubs. At present these are the following:

<i>The Chicago Club</i>	<i>The Hamilton Club</i>
<i>The Cleveland Club</i>	<i>The Indianapolis Club</i>
<i>The Detroit Club</i>	<i>The Louisville Club</i>
<i>The East Coast Club</i>	<i>The Toledo Club</i>
<i>The Fort Wayne Club</i>	

Intramural Athletics

Intramural programs are carried on in a variety of sports for the benefit of undergraduates who do not participate in varsity competition. Such activities are carried on in baseball, basketball, bowling, handball, touch football, and other sports.

Intercollegiate Athletics

Xavier University believes that there are sound values in intercollegiate athletic competition and that it has a valid place in American education. Intercollegiate athletics, therefore, are conducted at Xavier to further the education of the students physically, emotionally, intellectually, and morally. Participants learn the value of cooperative effort and the necessity of subordinating their own good to that of the group. They also see the need for poise and for competence in the face of opposition, and they learn a sportsmanlike respect for rules.

Intercollegiate rivalry also benefits the student body by providing wholesome recreation and the opportunity for the undergraduates to show their loyalty to all phases of the University's program. Students gain the educational value of sharing in group activity, and also learn to respect the rules as sportsmen.

The program of intercollegiate athletics at Xavier includes

Undergraduate Organizations

basketball, baseball, football, golf, sailing, tennis, and occasional sports. These activities are administered by the Athletic Director, who is advised by the Athletic Board and who is responsible to the Vice-President, Student Affairs.

Participants in intercollegiate athletics, as in other co-curricular activities, must be *bona fide* students in good standing. They will have entered the University in accordance with the admission norms published in the Catalogue and will be subject to the regular scholastic demands. If, in the judgment of the dean, their participation in athletics interferes with their progress toward a degree, he may forbid them to continue even though they are not formally on scholastic probation.

Xavier Publications

Primarily intended as a source of information for the Xavier family, these publications offer special opportunity to students who wish to learn news writing, editing, and creative literary expression.

The Athletic Review, published by the Department of Public Relations, is the official program for all home football and basketball games, and carries illustrated up-to-the-minute news about the Musketeers.

The Musketeer, the yearbook of the University, is a student edited publication distributed shortly before the commencement exercises in June. Intended as a permanent record of student life at Xavier, *The Musketeer* presents in colorful pageantry a panorama of the various school events, social functions, athletics, and campus organizations.

The Athenaeum, a literary magazine that dates from the old college, is intended to foster literary effort among students. The staff is composed of honor students in English.

The Xavier Alumnus combines campus news with reports about Xavier men and women everywhere. It is published by the Department of Public Relations.

The Xavier University News. Xavier University is the publisher of *The Xavier University News*. As publisher the University operates through a faculty adviser who is ultimately responsible to the President and who seeks to achieve the purposes of the publication through a program of pre-publication leadership and guidance as well as post-publication review and critique. The judgment of the adviser on the acceptability of material for publication is final.

Honor Societies

Alpha Sigma Nu. A chapter of this national honor fraternity for students of Jesuit colleges and universities was established at

Non-Student Groups

Xavier in 1939. Candidates for membership, chosen during their junior or senior year or from the Graduate School, must be outstanding in scholarship, in loyalty, and in service to the University.

Pi Mu Epsilon. The Ohio Theta Chapter of Pi Mu Epsilon, the national honorary mathematics fraternity, was established at Xavier University in 1962. The purpose of this organization is the promotion of scholarly activity in mathematics among students in academic institutions. Membership is limited to students, both graduate and undergraduate, majoring in mathematics or related subjects who have achieved distinction in scholarship and have done outstanding work in mathematics.

Psi Chi. Honorary psychology fraternity.

Sigma Pi Sigma. There is a chapter of Sigma Pi Sigma, national physics honor society, at Xavier University. Its purposes are to serve as a means of awarding distinction to students having high scholarship and promise of achievement in physics; to promote their interest in research; to encourage professional spirit and friendship among physics students; and to popularize interest in physics.

Tau Kappa Alpha. Honorary forensic fraternity.

The Xavier Order of Military Merit. XOMM is an honorary organization of Advanced Course students selected annually by a board consisting of elected representatives from the existing membership of XOMM and a member of the military faculty. The selection of new members is subject to approval by the PMS. Some of the criteria for selection to membership are leadership qualities, military and academic grades, and relative standing in the Cadet Regiment. Members of the order are awarded a red fourragere to be worn as part of the uniform.

Phi Alpha Theta. Kappa Nu Chapter, activated in 1965 at Xavier, is open to history students with a 3.25 or better over-all average.

Non-Student University Groups

The Booklovers Association, organized in 1925, actively promotes the interests of the library through the purchase of books and periodicals. Funds are raised by means of membership fees, benefit parties, and special gifts. This group, recruited largely from mothers of students, meets monthly during the academic year for lectures, card parties, and entertainments.

The Dads' Club of Xavier University has as its purpose: (1) co-operation with the administrative body of Xavier University in maintaining high standards of education; (2) the support of extra-curricular activities of the student body; (3) social acquaintance among members of the club; (4) promotion of the general welfare of

Non-Student Groups

Xavier University. Members of the faculty, and fathers of past, present, and prospective students are eligible for membership.

Xavier University Alumni Association. This association was organized in 1888. Its purpose is to strengthen and perpetuate college friendships; to preserve in the former students a warm regard for Alma Mater and a lively memory of the substantial benefits she has bestowed; to cherish and advance her interests, maintain her honor, and sustain her reputation by manly and honorable conduct.

The Xavier University Alumnae Association. Any woman student who has acquired thirty or more credits in residence is eligible for membership. The group was founded in 1926 and is affiliated with the International Federation of Catholic Alumnae.

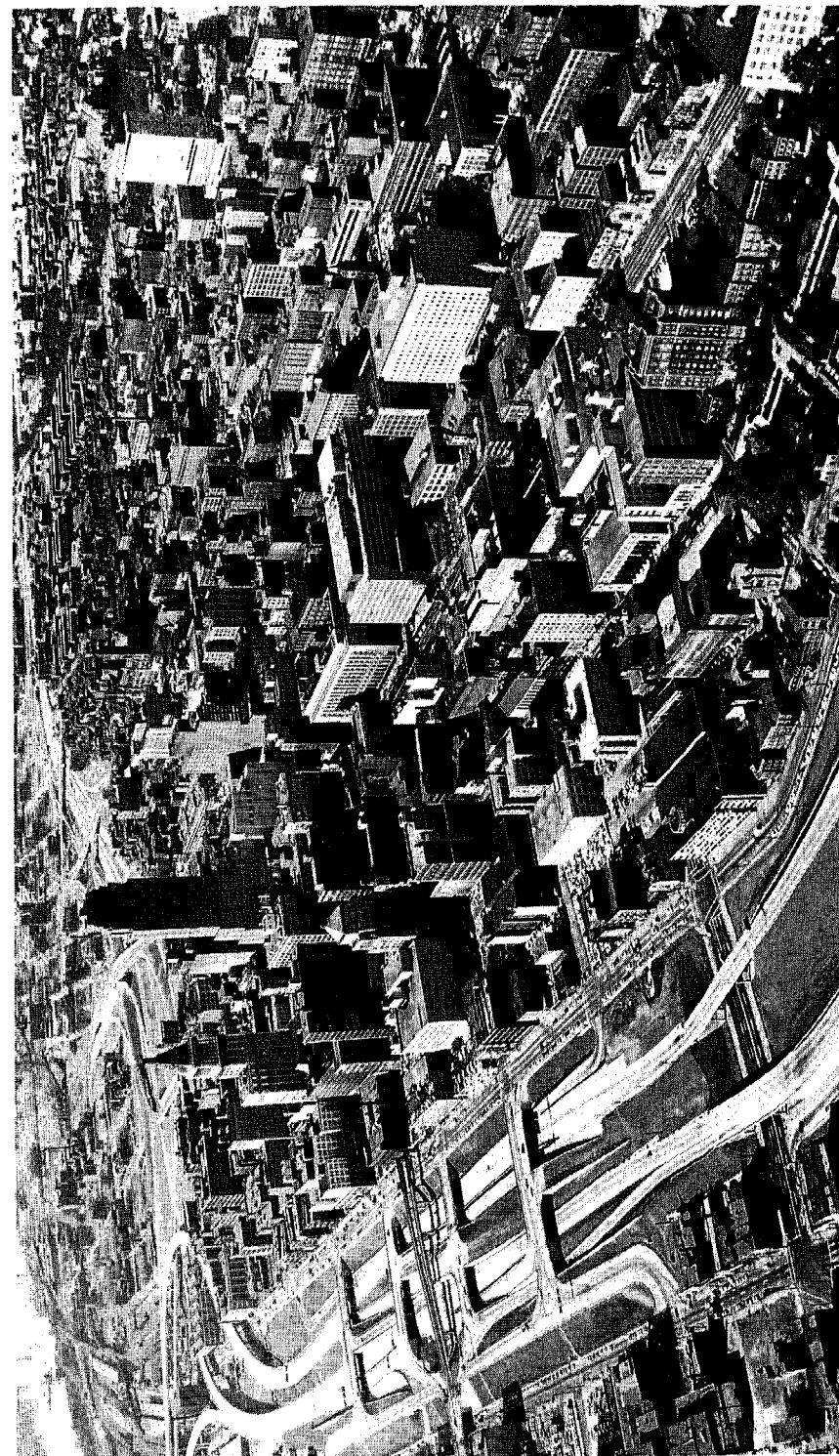
The Honors Course Committee. The women of this committee support the Honors Bachelor of Arts program and allied activities of the College of Arts and Sciences.

The Faculty Wives. This organization sponsors social activities to promote friendship among families of the faculty and the administration.

The Xavier Marian Society. This is an organization of men and women desiring to live and serve in accord with the spirit of Vatican II.

The Musketeer Club. Alumni and friends of the University's athletic program participate in the activities of this club.

The Natural Law Society. Sponsored by Xavier University, this Society was founded in 1955 for members of the legal profession. Its purpose is to assist legislators, judges, and attorneys in the application of the natural law to the enactment, interpretation, and practice of law. Membership is informal and open to the entire legal profession. The Society has a Governing Board composed of Greater Cincinnati lawyers. It sponsors speakers, panel discussions, and study seminars.



CINCINNATI: CITY ON THE MOVE

**The College of Arts and Sciences
The College of Business Administration**

**Application for Admission and Admission
Requirements**

Admission policies apply in general to all undergraduates. Those planning to enter the Evening College, however, should apply directly to the Dean of that college. No deposit is required of Evening College applicants.

Application for Admission

Application for admission to the College of Arts and Sciences or the College of Business Administration is made on a special form which will be supplied upon request made to: Director of Admissions, Xavier University, Victory Parkway, Cincinnati, Ohio 45207. The applicant must fill out the form and send it to the Director of Admissions. He must also request his high school (and any colleges he may have attended) to forward directly to the Director of Admissions a transcript of his academic record.

A deposit of \$25.00 must accompany the Application for Admission. This deposit is applicable to the student's regular account at registration and is refundable only if he is refused admission to the University. (A non-refundable fee of \$15.00 will replace the deposit of \$25.00, effective with applications submitted for admission in September, 1969.) Applicants are urged to submit their application forms with the deposit as early as possible. Upon receipt of an application from a student requiring housing accommodations, the Director of Housing will communicate with the applicant concerning a campus residence hall reservation.

Requirements for Admission

To be eligible to apply a student must be the graduate of an accredited high school with a minimum average of C (80%) and have a recommendation from his high school principal. A minimum

Admission

academic average of B is ordinarily required for admission to the Pre-Medical program. An applicant with a lower average is admitted at the discretion of the Committee on Admissions.

Applicants are required to take the College Entrance Examination Board Scholastic Aptitude Test. They should consult their high school principals for details regarding the test.

An applicant who was registered previously on the Evanston Campus but who has interrupted his residence is required only to submit the Application for Admission and the deposit, unless he has attended another school in the meanwhile.

Subjects Required for Admission

A unit is the equivalent of a subject extending through a school year of thirty-six weeks with five recitations per week. A minimum of fifteen units is required.

The following units are required of all applicants for admission:

English.....	3	Mathematics.....	1
Foreign Language.....	2	Natural Science.....	1
History.....	1	Other subjects.....	7

Of the seven non-specified units, three must be in college-preparatory subjects. Not more than four will be accepted in vocational subjects. The seven units must be offered from courses approved by the applicant's high school, for which credit has been granted. Single half units are acceptable only in those courses considered half-year subjects. Less than one full unit is unacceptable in subjects which ordinarily cover a full year's work and for which a full unit is usually granted. Applicants offering a classical or modern language must present a minimum of two units. An applicant who does not present two units of credit in a language (modern or classical) may offer as a substitute two units of either history and/or natural science. More than four units in any specific subject is not acceptable.

Admission on Probation

Applicants who do not meet the qualifications for admission may, under special circumstances, be admitted on probation at the discretion of the Committee on Admissions. They must pass whatever examinations the Committee on Admissions shall deem necessary.

Advanced Placement

The University grants advanced placement with credit in subjects in which a student has made a satisfactory score in the College Entrance Examination Board Advanced Placement tests.

Admission

Admission to the Pre-Medical Program

A minimum academic average of B is ordinarily required for admission to the pre-medical program. However, applicants whose averages are lower may be considered by the Committee on Admissions, given aptitude and intelligence tests, and admitted at the discretion of the Committee on Admissions.

Admission to Advanced Standing

Applicants from other institutions of collegiate rank must file with the Director of Admissions complete original credentials from all institutions attended. These credentials must include an official transcript of all high school and college credits showing the entire scholastic record; evidence of honorable dismissal or dismissals; and evidence of satisfactory completion of financial arrangements with the institution or institutions attended. No applicant may disregard his previous college record and apply for freshman standing.

The rank of advanced standing to which the student will be admitted will depend upon the quantity and quality of the work done in the other institution or institutions, the accreditation of the institution, and the conformity of the work to the degree program for which the student wishes to register. Courses in which the applicant has received the lowest passing grade will not be acceptable. These courses need not be repeated unless repetition be deemed necessary by the dean or the directors of the departments. In all cases evaluation of credits for advanced standing will be provisional for at least one semester.

Students dismissed for poor scholarship from the University or from other institutions will not be eligible for admission or readmission until after the lapse of at least one semester. In all cases, admission or readmission and the conditions of such, will be determined finally by the Committee on Admissions.

All credentials must be on file in the office of the Director of Admissions at least one month prior to the day of registration. (See paragraph on Necessary Credentials.) It is advisable to get transcripts in much earlier.

Necessary Credentials

Applicants for admission to Xavier University must submit official records from all high schools and colleges previously attended. *These records must be sent to the Director of Admissions directly by the proper officer of the school or schools formerly attended; never through the student.* Credentials accepted for admission become the property of the University and are kept on file permanently. *All credentials must be filed at least one month before the day of registration.*

Admission

Admission of Special Students

Although the University usually recommends a complete program of studies, students who possess sufficient maturity, experience, and educational background may, with the dean's consent, choose special courses without following a complete degree program. Courses thus taken may be subsequently credited toward a degree if proper credentials are presented.

Notification of Admission

The applicant will receive from Xavier University a notice of admission or a notice of unfavorable action as soon as the University has received his admission form and the official records from all high schools and all colleges previously attended.

Provisional Admission

Provisional admission may be granted by the dean to a student who has been unable to complete arrangements for formal admission before registration dates. If the student is later discovered to be unqualified for admission, his admission and registration are canceled.

Admission of Veterans

Xavier University is accredited with the Veterans Administration for educational training under United States Code, Title 38, Chapter 31 (Disabled Veterans), Chapter 34 ("New" GI Bill), and Chapter 35 (War Orphans).

All requests for information should be addressed to The Director, Veterans' Educational Benefits, Xavier University, Victory Parkway, Cincinnati, Ohio 45207

Admission to Evening College

Those seeking admission to the undergraduate Evening College, whether in Arts and Sciences or in Business Administration, should apply to: The Dean, Evening College, Xavier University, Cincinnati, Ohio 45207.

Most of the regulations under "Application for Admission and Admission Requirements" apply also to the Evening College. But certain differences must necessarily exist between admission to a full-time and a part-time program; hence, those seeking admission to the Evening College would be well advised to write or telephone that office.

Registration

Time of Registration

Fixed dates in each session found in the academic calendar of this Catalogue are reserved for registration.

Late Registration

Registration on days later than the assigned dates may be permitted upon the payment of a late registration fee of \$5.00 and \$1.00 per day up to ten days.

Change in Schedule

After the student has filed registration forms, changes in courses or sections can be made only with the consent of the dean at the recommendation of the departmental adviser. No change in schedule may be made later than one week after the inception of classes.

A fee of \$3.00 will be charged for each change.

Number and Choice of Courses Permitted

The number and choice of courses or total number of credit hours in a student's program of studies are subject to such restriction as shall be deemed necessary by the dean or the departmental adviser.

Selection of Courses

Classified students must take the required courses at the proper class level: thus, all freshman courses should be completed before the sophomore courses.

Both classified and unclassified students must observe prerequisites set by the University or by the departments which conduct the instruction. *Students may not disregard the directions of the dean and of the chairmen of departments in this matter.*

Since the University must consider the needs of all students, it may sometimes be unable to accommodate itself to the preferences of some students for particular hours and professors. The scheduling of courses and sections at certain hours does not mean that a student can always be admitted to any given section which he may select.

Fees

Communications concerning costs for the Evening College should be addressed to the Dean of the Evening College, Xavier University, Cincinnati, Ohio 45207. Certain charges, such as the deposit with the application, are not required by the Evening College.

The following rates are effective in the regular academic year and in the summer sessions. All communications concerning expenses for the College of Arts and Sciences or the College of Business Administration should be addressed to the Director of Admissions, Xavier University, Victory Parkway, Cincinnati, Ohio 45207.

A deposit of \$25.00 must accompany the Application for Admission. For those requesting housing accommodations, an additional \$100.00 is required. These deposits will be applied to the student's regular account. They will not be refunded if the applicant having been accepted, cancels his application or fails to enter the University.

(A non-refundable fee of \$15.00 will replace the deposit of \$25.00, effective with applications for admission in September, 1969.)

Accounts Payable (Undergraduate Day Classes)

All accounts must be settled on the day of registration. Attendance at classes will not be permitted until all financial obligations have been completed.

Ordinary Expenses

Tuition per credit hour, undergraduate colleges	\$33.00
N.B.—Auditors pay same rate as above.	
Matriculation fee (payable once)	10.00
R.O.T.C. fee (per semester)	10.00
Deposit (partially refundable)	25.00
Laboratory science fee (per course per semester)	10.00
Laboratory materials deposit (per course per semester — partially refundable)	10.00
Laboratory materials deposit, Comparative Anatomy	12.00
Laboratory materials deposit for science thesis (partially refundable)	25.00

Fees

General fee (per semester)	50.00
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(The general fee includes the use of all non-classroom facilities, the Student Health Center, and a reduction in the fee charged for the services of the Psychological Services Center.)

Identification Card (annually)	2.00
Language laboratory fee (to be paid by all students required to use the language laboratory, per semester)	5.00
Psychology laboratory fee (per semester)	10.00

Honors Course

A flat rate of \$525.00 per semester (exclusive of military fees) has been approved by the Board of Trustees for students pursuing the Honors A.B. degree course. This flat rate will also include extra courses which the Honors A.B. student, with the permission of the dean, wishes to take.

Contingent Expenses

Fee for change in registration	\$ 3.00
Late registration	5.00
Additional per day	1.00
Maximum	10.00
Special examinations (each)	2.00
Duplicate transcript	1.00
Graduate Record Examination	4.00
Graduation fee	25.00
Service charge (deducted if bill is paid in full within thirty days after the opening date of the semester)	4.00

Room

Room, per semester	\$155.00-\$185.00
Room damage deposit (refundable when student no longer lives on campus)	25.00

Room Equipment

All rooms are equipped with a bed, desk, chair, bed linen, and desk lamp.

Students are expected to bring blankets, towels, and soap.

Board

Meals are served in the University Center. Students who live on campus are required to take their meals in the University Dining

Fees

Room from Monday through Friday. During the academic year rates for three meals a day, five days a week, will be between \$250.00 and \$270.00 per semester, depending on food, labor, and maintenance costs. Meals are taken on a pay-as-you-go basis on Saturdays and Sundays.

Refunds (Undergraduate)

A refund of *tuition* may be claimed in the case of withdrawal or dismissal. During the academic year the amount refunded will be diminished by 20 per cent of the total initial amount for each two weeks of class meetings or fraction thereof. *No refund will be made after classes have been in session for more than eight weeks.* The amount of the refund will be calculated from the date of formal notification of withdrawal. Cf. page 75.

During summer sessions the amount refunded will be diminished by 20 per cent of the total initial amount for each four class days of the session or fraction thereof. No refund will be made after classes have been in session for more than sixteen class days.

Fees are not refunded in regular or summer sessions.

A refund of board expenses may be claimed by one separating from the University. The amount of refund will be proportioned to the date at which the student gives formal notice of separating from the University.

Students drafted or called to service as reservists will receive a 100% refund of tuition and a partial refund for the unused portion of their General Fee. At the time of application for this refund, the student's ID card must be returned to the Treasurer's office.

Academic Regulations

Classification of Students

Lower Division Groups:

1. Freshmen — students having less than 30 credit hours and 60 quality points.
2. Sophomores — students having from 30 credit hours and 60 quality points to 62 credit hours and 125 quality points.

Upper Division Groups:

1. Juniors — students having from 63 credit hours and 126 quality points to 93 credit hours and 187 quality points *inclusive of all lower division requirements.*
2. Seniors — students having a minimum of 94 credit hours and 188 quality points *inclusive of all lower division requirements.*

Other Groups:

1. Part-time — students taking less than 12 credit hours of work in any semester.
2. Unclassified — students who have not declared themselves as candidates for any degree.
3. Auditors — students not taking courses for college credit.

Unit of Instruction

A unit of instruction is one hour a week for a minimum of 15 weeks. The unit is called a *credit hour*. A weekly two- or three-hour period of laboratory work is considered equivalent to one credit hour.

Examinations

Examinations in all courses are regularly held at mid-semester and the end of the semester. A student who has been absent from a mid-semester or semester examination will receive a grade of X if the excuse for the absence is acceptable to the dean; otherwise, the absentee will receive an automatic failure. Absence, however, does not excuse a student from the requirement of a special examination at a time determined by the dean. *If an X grade is not removed within two weeks, a grade of F will be given for the course.*

Written assignments are due at the time specified by the instructor. If extension of time is granted, the student will be given a temporary grade of I. Unless the assignments are completed within

Regulations, Day Colleges

two weeks after the last day of the regularly scheduled examinations, the student will be recorded as failing the course.

If a student claims knowledge of a subject for which he cannot furnish an official record, a special examination may be given with the approval of the dean and the chairman of the department.

Grading System and Reports

- A — Exceptional. Indicates not only high achievement but also an unusual degree of intellectual initiative.
- B — Good. Indicates attainment above the average.
- C — Average. Indicates the normal attainment for the average student.
- D — Inferior. Indicates passing work but below the normal attainment.
- F — Failure.
- FA — Failure because of excessive absences.
- I — Incomplete; grade withheld pending fulfillment of assignment.
- W — Withdrawal (approved).
- X — Absent from examination.

N.B.—No student may withdraw from a class within the last 28 days before the first day of the final examinations. At this time he must either take the examination or receive a failure.

Quality Points

The quality point is the unit used in measuring the quality of student achievement in a course. The number of quality points received for any course is equal to the number of quality points attached to the grade received multiplied by the number of credit hours yielded by the course. Quality points are given as follows:

- A — 4 points per credit hour
- B — 3 points per credit hour
- C — 2 points per credit hour
- D — 1 point per credit hour

The scholastic standing of the student at the end of any session is the ratio of the total number of quality points received to the total number of credit hours carried in that session. An Evening College session or semester consists of twelve consecutive semester hours.

Probation

Freshmen admitted to the University on probation must earn a quality point average of 1.75 during the first semester to remove the probation.

Students whose academic work does not meet the following quality point norms will incur probation:

Freshmen whose average falls below 1.75 in either semester.

Sophomores, juniors, and seniors whose average falls below 2.00 in any semester.

Probation will continue for at least one semester. During that semester the student's program will be reduced by at least one course, and he may not participate in co-curricular activities except those of a religious nature. Probation which begins or ends at midyear shall begin or end with the first day of class in the second semester.

If the student fails to average 2.00 during the semester in which he is on probation, he will be dismissed from the University.

If his average during that semester is 2.00 but his over-all average is less than 2.00, his probation will continue for a second semester.

A student who continues on probation during two consecutive semesters because his average is below 2.00 will be dismissed from the University.

If the student's record or certain modifying circumstances indicate that his work will improve and that he will graduate in approximately normal time, the dean will give due consideration to such facts as the record indicates. The above should be interpreted in the light of the fact that an average of 2.00 is a minimum requirement for graduation.

Warned List

A freshman student whose quality point average is low but not low enough to justify his incurring probation is placed on the warned list.

Such a student does not come under censure, but his participation in co-curricular activities may be limited at the discretion of the dean or the student's advisor.

Failure

A student who fails in two or more courses in a semester may be excluded from registration at the dean's discretion.

Permission to re-enter the University will be granted only after the student petitions for re-admission in writing and sets forth evidence of his ability to do satisfactory academic work.

Censure

The University reserves the right to censure the conduct of any student on or off the campus in accord with the generally accepted norms of good behavior, Catholic practice, and Catholic principles of morality. This censure will be regarded as purely disciplinary and may take the form of correction, suspension, or dismissal which the President of the University, upon advice of the Committee on Student Welfare, may deem appropriate. Suspension will carry with it the scholastic loss resulting from absence, and dismissal will mean the loss of credit hours. When a student incurs the disciplinary censure of dismissal, or withdraws while under the censure of suspension, the University has the right to declare, at the discretion of the President, the facts of disciplinary censure to the admissions officer of any educational institution to which the student may subsequently apply.

Attendance

In order to secure credit in any course in which he is registered, the student is required to attend classroom and laboratory exercises regularly and promptly. Absences date from the day of opening announced in the calendar.

Absence from a Test

Unexcused absence from a previously announced test may incur the penalty of a failure in that particular test.

Transfer within the University

A student who wishes to transfer from one college of the University to another must make application to the Dean or the Assistant Dean of the College to which he desires to transfer. If the application is approved, arrangements for the transfer will be made.

Transfers should be arranged at least one month before the opening of a session.

Withdrawal from Course

If a student withdraws from any or all courses without permission of the Dean or the Registrar, he receives an automatic failure. *Permission will be given only when application is made within two weeks after discontinuance of attendance or from the corresponding portion of a summer session.*

The student who withdraws from any or all courses with the requisite permission receives a grade of W. See Grading System, page 72.

Withdrawal from the University

A student who wishes to withdraw from the University must notify the office of the Dean or the Registrar either in person or in writing. *A student is considered to be in attendance until he has given this formal notice of withdrawal.*

A student will be obliged to withdraw for reasons of poor scholarship, failure to remove academic probation, or misconduct.

Xavier University reserves the right to require a student to withdraw if, in the judgment of University officials, such action would be beneficial to the physical, mental, emotional, or moral best interests of the student, or is considered necessary for the welfare of the University.

Honorable Dismissal

Honorable dismissal is voluntary withdrawal from the University with the consent of the Dean or the Registrar. A statement to such effect, indicative of the student's good standing so far as character and conduct are concerned, *will be issued only when all indebtedness to the University has been adjusted.*

Transcript Regulations

Application for a transcript of credits must be made in writing by the student himself and filed with the registrar *at least two weeks before the record is needed.*

Requests for transcripts for purposes of transfer to another university or for any other purpose cannot be granted during the busy periods of examination and registration.

Transcripts are issued only after the student has fulfilled all financial obligations to the University.

There is no charge for the first transcript. A fee of \$1.00 is charged for each additional transcript.

Since the Registrar's Office does not maintain Graduate School or Evening College records, students who have been registered in one of the undergraduate day colleges and later in the Graduate School or Evening College must apply to both the Registrar's Office and the Graduate School or Evening College when requesting transcripts.

Auditor

A student may audit a course if he has the written permission of the Dean. No one may change from the status of auditor to that of credit student, or from credit student to auditor after the date for assigning the grade of W passes.

With permission, juniors and seniors who are on the Dean's List may audit one extra course without charge. Others may enroll as auditors upon payment of the usual tuition. *Academic credit is never given to an auditor.*

Curricular Information

Lower Division and Upper Division Courses

Courses are grouped according to their basic or advanced content. Basic courses, which are ordinarily open to freshmen and sophomore students, are regarded as *lower division* courses. *Upper division* courses are open to junior and senior students. Sophomore students, who have completed their *lower division* requirements in a particular department, may, with the approval of their advisors and the chairman of the department, enroll in an *upper division* course in that department.

Departments

For the purposes of faculty administration and of classification of courses according to the nature of their subject matter, all courses are grouped in *departments*. In the College of Arts and Sciences there are these departments: Biology, Chemistry, Communication Arts, Economics (A.B. or B.S.), English, History and Political Science, Classical Languages, Modern Languages, Mathematics, Military Science, Philosophy, Physical Education, Physics, Psychology, Sociology, and Theology. The College of Business Administration has Departments of Accounting, Economics (B.S.B.A.), Finance, Management and Industrial Relations, and Marketing. The Evening College offers courses in most departments.

Lower Division Objectives

Toward realization of the immediate University objectives (intellectual competence with a sense of religious and moral responsibility) and the objectives of the undergraduate division (an exclusively general and liberal training), the student should, at the completion of his work of the first two years, have attained the following:

1. A religious knowledge adequate for personal orientation and influential Christian living
2. An acquaintance with, and some practice in, the modes of thinking — philosophical, mathematical, and scientific
3. A competence in basic English communication, written and oral, with an adequate acquaintance with the types, and some of the masterpieces of English literature
4. Generally, a reading knowledge of at least one foreign language

Curricular Information

5. An acquaintance with the history and principles of social institutions

The objectives and standards of the several departments concerned in this program indicate their special contribution to the above, in such a way that a student who has completed a minimum of sixty-four hours with a C average, can be regarded as having sufficiently attained the objectives.

Excess quality points at the completion of the student's lower division work may not be applied to remove a quality-point deficiency in the upper division work.

Field of Specialization

Before the close of his sophomore year, the student who wishes to continue his education in the University will be required to choose a field of specialization for his future work. Only upon acceptance by the chairmen of the departments concerned, and on successful completion of his *lower division* work, may the student be considered eligible to continue.

In the last semester of his *lower division* work, a student who has satisfied the *lower division* prerequisites in a particular subject, may, if his schedule allows, and if the dean and the chairman of the department concerned authorize it, take an *upper division* course in that subject.

The field of specialization consists of a major and a minor. See General Requirements for All Degrees, No. 3.

The College of Business Administration requires a curricular diversification as follows: thirty-six hours of core courses and twenty-four hours in the student's area of specialization, without defining a major or, especially, a minor.

Upper Division Objectives

Toward more special realization of the immediate University objectives (intellectual competence, etc.) and the objectives of the undergraduate division for the last two years of college (continued general and liberal training *plus* opportunities for specialization), the student is offered the following:

1. A continuation of his general and liberal training in the study of philosophy and allied subjects
2. Fields of specialization, with a major and minors system, for prudent concentration

Degrees

The University will confer a bachelor's degree upon any candidate of the University who has successfully completed an accepted program of studies, and who has fulfilled, prior to graduation, all degree requirements, both general and particular. The undergraduate degrees conferred by the University on candidates of the College of Arts and Sciences are the degrees of Bachelor of Arts, the Honors Bachelor of Arts, Bachelor of Science, and Bachelor of Literature. Graduates of the College of Business Administration receive the Bachelor of Science in Business Administration.

General Curricular Requirements

The following requirements apply to all curricula:

1. Candidates for degrees on the Evanston campus, whether in arts, in science, or in business administration, must complete the following requirements as the core of their liberal education.

	Cr. Hrs.
Christian Culture	8
English (composition and literature)	12
History	6
Mathematics (except physical education, and A.B. option)	6
Military Science* (unless exempted)	6
Modern Language† (depending on high school units)	6/12
Philosophy	18
Science (A.B. option)	8
Speech	2
Theology‡	8

2. In general, students in any program may fulfill requirements for the Bachelor of Arts degree by including two years of college Latin and six to twelve hours of a modern language in their course of study. See block schedule for A.B. (General).
3. Students must complete from six to fifteen hours of *lower division* work preparatory to the specialization of their choice. They must also have no fewer than eighteen hours of *upper*

*Not required of Evening College students.

†Not required in business administration.

‡Non-Catholic students should confer No. 4 in the General Requirements for Graduation.

Curricular Information

division work in the major, in all of which they must attain an average of C. Twelve hours of *upper division* work and at least six hours of *lower division* work are required for the minor.

General Requirements for Graduation

In addition to being a classified student at Xavier University and meeting the requirements of his program for the bachelor's degree, a candidate must have—

1. At least 128 hours with an overall average of C.
2. An average of C in his upper division courses.
3. Eighteen hours of prescribed philosophy courses.
4. Eight hours of Theology if he is a Catholic. (Non-Catholics complete Th 3 and 5. Those in Evening College may substitute by arrangement with their dean.)
5. Eight hours of Christian Culture courses including Pl 132 and So 125.
6. The last 32 hours *in residence* and with an average of C.
7. Filed formal application for his degree in the proper college office.
8. Taken the Graduate Record Examination (Advanced Test) in his major field if it is a departmental requirement.
9. Passed his comprehensive examination if he is in the College of Arts and Sciences—unless his department has a substitute requirement. (When a thesis is required, the original and one copy must be deposited in the registrar's office on or before the date designated in the University Calendar in the Catalogue.)
10. Discharged all financial obligations to the University.
11. Agreed to be present at the Commencement.

Graduation Honors

Honors are awarded on the basis of outstanding attainment. A student who has earned a quality-point average of 3.75 in his college work will be graduated *Summa cum Laude*; one who has earned 3.5, *Magna cum Laude*; one who has earned 3.25, *cum Laude*. These honors are announced at commencement and are inscribed on the diplomas of those meriting them.

For students graduating in June, the final semester's work cannot be computed in determining the quality-point average for honors.

Curricular Information

Transfer students are eligible for honors at graduation only under the following conditions:

1. They must have completed the last 64 semester hours of work at Xavier University.
2. Their quality-point average must be computed on the basis of *all of their college work*.
3. Under no circumstances will honors be awarded that are higher than the honors merited by the quality-point average earned at Xavier University.

Reservation of Rights

The University reserves the right to modify its graduation and other requirements as may seem necessary from time to time. It will be obligated only during the academic year of the student's registration by requirements published in the Catalogue for that year.

Students who interrupt their attendance and who later return must meet the curricular requirements in force at the time of their return.

Registration Procedures

The block schedules on the following pages are given as guides to the preparation of individual programs of study.

Before registration each semester, departmental advisers and students are urged to check individual student programs *in detail* for:

1. Correct course levels — *lower division* or *upper division*. (*Upper division* courses may not be taken before the completion of required *lower division* courses in the field.)
2. Whether degree requirements are being fulfilled.
3. Correct Catalogue numbers of courses.
4. The maximum number of semester hours of credit permitted per semester at the respective class level — freshman, sophomore, junior, or senior. Permission to take an additional course may be granted only at the discretion of the dean.

Degree Programs—

The College of Arts and Sciences

THE HONORS BACHELOR OF ARTS

The Honors Bachelor of Arts is awarded to students who have completed the entire Honors program of the University. This curriculum was instituted in the belief that its values meet the needs of the day for Christian humanism. It attempts to build a security based on those things that are themselves secure—the great languages and their literatures; the nature of science; the history of human thought and action; philosophy, by which men come to understand themselves, the ways of God with humankind, their dignity as men, and their obligations to their fellowmen.

Only those ranking high in their high school graduating classes will be admitted to the Honors program. A special board of admissions passes on the fitness of applicants. In doubtful cases applicants will take special examinations to determine their qualifications for the program.

In addition to the regular requirements for admission to the University, students accepted for the Honors course must have four units of Latin, and it is desirable that they have two units of Greek.

It will be noted that the thirty-five or thirty-eight elective hours in the H.A.B. course enable the superior student, in addition to completing an intensive course in the liberal arts, to cover the pre-medical requirements or to do concentrated work in a major field such as classics, economics, English, history, the modern languages, philosophy, or psychology.

The minimum requirements:

Subject	Sem. Hrs.			Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Biology*	8		Military Science	6	
Chemistry†	9		Modern Language	6	
English	6	9	Philosophy	3	22
Greek	6-12	12	History of Classical		
History	6	6	Lit.		6
Latin	6	18	Theology	8	
Mathematics‡	6		Electives		35

*With approval of the Director of the H.A.B. program, students majoring in mathematics may substitute two years of physics for chemistry and biology.

†In place of chemistry, psychology majors take biology.

‡The six hours of mathematics must include calculus.

Honors Bachelor of Arts

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
En 3 English Comp.	3	En 4 English Comp.	3
Fr 1, Gk 17, El. Fr., Lysias†	6	Fr 2, Gk 21 El. Fr., Plato‡	6
or		or	
Gk 1, 2 Elem. Greek	6	Gk 17, Gk 21, Lysias, Plato	6
Hs 7 Europe to 1648	3	Hs 8 Europe Since 1648	3
Lt 28 Cicero	3	Lt 51 Virgil	3
Mt 60 Calculus I	3	Mt 61 Calculus II	3
Ms 1 First Year Basic	1	Ms 2 First Year Basic	1
Th 40 Christ in Gospel	2	Th 41 Christ the Redeemer	2
Total	21	Total	21

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Bl 3 Zoology	4	Bl 4 Zoology	4
Ch 3* General Inorganic	4	Ch 4* General Inorganic	5
En 31 Studies in Poetry§	3	En 32 Studies in Drama§	3
Gk 160 Sophocles	3	Gk 141 Thucydides	3
Lt 113 Adv. Latin Comp.	3	Lt 131 Horace	3
Ms 31 Second Year Basic	2	Ms 32 Second Year Basic	2
Th 42 Christ in His Church	2	Th 43 Christ in the Soul	2
Elective	3	Pl 34 Logic	3
Elective, Directed**	3	Elective, Directed**	3
*Total	21-24	*Total	25
**Total	20-23	**Total	20-23

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ch 3** General Inorganic	4	Ch 4** General Inorganic	4
Gk 171 Plato	3	Gk 151 Homer	3
Hs 141 U. S. to 1865	3	Hs 142 U. S. Since 1865	3
Lt 191 Lucretius	3	Lt 112 Tacitus	3
Elective	6	Elective	6
Pl 111 Phil. Psychology	3	Pl 105 Phil. of Nature	3
**Total	16-22	**Total	17-22
*Total	12+ Sciences	*Total	12+ Sciences

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
English Elective	3	Lt 188 Hist. of Classical Lit.	3
Lt 161 Roman Comedy	3	Lt 142 Juvenal	3
Gk 188 Hist. of Classical Lit.	3	Pl 132 Pers., Soc. Ethics	3
Pl 131 Prin. of Ethics	3	Pl 198b Saint Thomas	5
Pl 198a Saint Thomas	5	Major Elective	9
Major Elective	6		
Total	16-23	Total	13-23

*For pre-med.

**For non pre-med.

§Students (except those who have completed En 14) may substitute En 34: Studies in the Novel for either En 31 or 32.

†Students having two units of high school Greek will register for Fr 1 and Gk 17.

‡Students who have completed Fr 1 and Gk 17 will register for Fr 2 and Gk 21. Those who have completed Gk 1, 2, will register for Gk 17 and 21.

THE BACHELOR OF ARTS

The Bachelor of Arts degree is conferred upon students who have satisfactorily completed two years of college Latin (with an average of C or better) and six to twelve hours of a modern language or twelve hours of Greek, along with the hours in the various fields indicated below.

A major or minor in Classics, combining Latin and Greek, may also be arranged with the approval of the Chairman of the Department.

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Latin.....	12	—	Psychology.....	3	—
English.....	12	—	Speech.....	2	—
History.....	6	—	Theology.....	8	—
Math. or Science....	6-8	—	Christian Culture....	—	8
Military Science....	6	—	Minor.....	—	*
Modern Language..	6-12	—	Major.....	—	*
or Greek.....	12	—	Electives.....	—	6
Philosophy.....	3	15			

*Departmental requirements for major and minor must be fulfilled.

A.B.

Freshman Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
En 3	English Comp.....	3	En 4	English Comp.....	3
Hs 7	Europe to 1648.....	3	Hs 8	Europe since 1648....	3
Lt.....		3	Lt.....		3
ML 1 or Gk.....		3	ML 2 or Gk.....		3
MS 1	First Year Basic.....	1	MS 2	First Year Basic.....	1
Th 40	Christ in the Gospels..	2	Th 41	Christ, Our Redeemer..	2
Total.....		15	Total.....		15

Sophomore Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
En 31	Studies in Poetry*....	3	En 32	Studies in Drama*....	3
Lt.....		3	Lt.....		3
ML 31 or Gk.....		3	ML 32 or Gk.....		3
MS 31	Second Year Basic....	2	MS 32	Second Year Basic....	2
Ps 31	Gen. Psychology.....	3	Pl 34	Logic.....	3
Th 42	Christ in His Church..	2	Th 43	Christ in the Soul....	2
Total.....		16	Total.....		16

Junior Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
So 125	Marriage.....	2	Christian Culture.....		2
Major.....		6	Major.....		6
Minor.....		3	Minor.....		3
Mt or Science.....		3-4	Mt or Science.....		3-4
Pl 111	Phil. Psychology.....	3	Pl 100	Metaphysics.....	3
Total.....		17-18	Total.....		17-18

Senior Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
CA 1	Prin. of Speech.....	2	Senior Comp. Rev.....		2
Major.....		3	Pl 132	Pers., Soc. Ethics....	3
Minor.....		3	Major.....		3
Pl 131	Prin. of Ethics.....	3	Minor.....		3
Christian Culture.....		2	Elective.....		6
Pl 105, 106, 107, or 133.....		3			
Total.....		16	Total.....		17

*Students (except those who have completed En 14) may substitute En 34: Studies in the Novel for either En 31 or 32.

THE BACHELOR OF SCIENCE (Biology)

The Bachelor of Science is conferred on students who major in biology and who generally minor in chemistry, psychology, or other sciences. Lectures and laboratory procedures are designed to give students a knowledge of basic biological principles and a training in careful observation, controlled experimentation, and a thoughtful analysis of scientific data. The department aims, furthermore, to contribute to the liberal education and cultural background of its students. This program provides an adequate foundation for further studies in graduate schools of biology, for professional studies in medicine and dentistry, and for the teaching of biology on the high-school level.

The minimum program requirements are:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Biology.....	8	28	Modern Language...6-12	—	—
Minor.....	8	14	Philosophy.....	3	15
Christian Culture....	—	8	Psychology.....	3	—
English.....	12	—	Physics.....	8	—
History.....	6	—	Speech.....	2	—
Mathematics.....	6	—	Theology.....	8	—
Military Science.....	6	—			

With the approval of the Chairman of the Department, a student majoring in biology may substitute some other courses to fulfill the requirements of a major.

Students majoring in biology may use the following sciences as a minor: Ph 3, 4, Ch 3, 4, and eight hours of advanced chemistry.

B.S. (Biology)

Freshman Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
Bl 3	Gen. Zoology.....	4	Bl 4	Gen. Zoology.....	4
Ch 3	Gen. Chemistry.....	4	Ch 4	Gen. Chemistry.....	5
En 3	English Comp.....	3	En 4	English Comp.....	3
Mt 31 (or 11).....		3	Mt 60 (or 12).....		3
MS 1	First Year Basic.....	1	MS 2	First Year Basic.....	1
Th 40	Christ in the Gospels..	2	Th 41	Christ, Our Redeemer..	2
Total.....		17	Total.....		18

Sophomore Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
Bl 105	General Botany.....	4	Bl 152	Genetics.....	2
Hs 7	Europe to 1648.....	3	Hs 8	Europe since 1648....	3
MS 31	Second Year Basic....	2	MS 32	Second Year Basic....	2
Ph 3	College Physics.....	4	Ph 4	College Physics.....	4
Pl 34	Logic.....	3	Pl 111	Phil. Psychology.....	3
Th 42	Christ in His Church..	2	Ps 31	Gen. Psychology.....	3
			Th 43	Christ in the Soul....	2
Total.....		18	Total.....		19

Junior Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
Bl 101	Compar. Anatomy....	4	Bl 112	Embryology.....	4
Ch 101	Organic Chemistry... 4		CA 1	Prin. of Speech.....	2
En 31	Studies in Poetry*....	3	Ch 102	Organic Chemistry... 4	
ML 1	Elem.....	3	ML 2	Elem.....	3
Pl 100	Metaphysics.....	3	Pl 105, 106, 107, or 133.....		3
So 125	Marriage.....	2	CC	Elective.....	2
Total.....		19	Total.....		18

Senior Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
Bl 199a or Bl 192a.....		1	Bl 199b or Bl 192b.....		1
Bl 161	Physiology.....	4	Bl 141	Comp. Histology....	4
Bl	Elective.....	4		Elective.....	4
CC	Elective.....	2	En 32	Studies in Drama*....	3
ML 31	Interm.....	3	Pl 132	Pers., Social Ethics... 3	
Pl 131	Prin. of Ethics.....	3	ML 32	Interm.....	3
Total.....		17	Total.....		14

*Students (except those who have completed En 14) may substitute En 34: Studies in the Novel for either En 31 or 32.

THE BACHELOR OF SCIENCE (Chemistry)

The Department of Chemistry offers a comprehensive curriculum leading to the Bachelor of Science. The program covers the four major fields (inorganic, analytical, organic, and physical chemistry), the preparation and identification of compounds, and the literature on the subject. Ch 190 (Chemical Literature) fits the student to prepare his thesis and amounts to a beginning course in research.

Xavier University is approved by the American Chemical Society for its training in chemistry.*

Departmental requirements for a major include:

1. The completion of Ch 3 and 4 as an introduction to *upper division* work.
2. The completion of Ch 51, 101, 102, 106, 107, 116, 125, 126, 170, 171, and 190, or the equivalent.
3. A senior thesis, Ch 199.

Departmental requirements for a minor include:

1. The completion of Ch 3 and 4 as an introduction to *upper division* work.
2. The completion of Ch 51, 101, 102, and 121.

The minimum program requirements follow:

Sem. Hrs.				Sem. Hrs.	
Subject	L.D.	U.D.	Subject	L.D.	U.D.
Chemistry.....	13	31	German†.....	6-12	—
Christian Culture....	—	8	Philosophy.....	3	15
English.....	12	—	Physics.....	8	—
History.....	6	—	Theology.....	8	—
Mathematics.....	9-12	3-6	Speech.....	2	—
Military Science.....	6	—			

*Students completing the approved program of studies are graduated as "certified" chemistry majors.

†Russian may be substituted for German.

B.S. (Chemistry)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ch 3 General Chemistry....	4	Ch 4 General Chemistry....	5
Mt 31 Algebra, Trig. (or Mt 60)*.....	3	Mt 60 Calculus (or Mt 61)...	3
Hs 7 Europe to 1648.....	3	Hs 8 Europe since 1648....	3
En 3 English Comp.....	3	En 4 English Comp.....	3
Th 40 Christ in the Gospels..	2	Th 41 Christ, Our Redeemer..	2
MS 1 First Year Basic.....	1	MS 2 First Year Basic.....	1
		CA 1 Prin. of Speech.....	2
Total.....	16	Total.....	19

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ch 101 Organic Chemistry....	4	Ch 102 Organic Chemistry....	4
Mt 61 Calculus (or Mt 45)...	3	Mt 45 Vectors and Geom. (or Mt Upper Div)...	3
En 31 Studies in Poetry†....	3	Pl 34 Logic.....	3
Ph 9 University Physics I..	4	Ph 10 University Physics II..	4
Th 42 Christ in His Church..	2	Th 43 Christ in the Soul....	2
MS 31 Second Year Basic....	2	MS 32 Second Year Basic....	2
Total.....	18	Total.....	18

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ch 51 Quantitative Chem....	4	Ch 170 Inorganic Chem.....	3
Ch 125 Physical Chemistry....	3	Ch 126 Physical Chemistry....	4
Mt Upper Div.....	3	Ch 190 Chemical Literature..	1
Gr 1 Elementary German... 3		Gr 2 Elementary German... 3	
Pl 111 Phil. Psychology.....	3	Pl 100 Metaphysics.....	3
So 125 Marriage.....	2	CC Christian Culture.. 2 (3)	
		En 32 Studies in Drama†....	3
Total.....	18	Total.....	19 or 20

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ch 116 Instrumental Anal....	4	Ch 106 Qual. Organic Chem..	3
Ch 107 Interm. Organic Chem.	2	Ch 199b Senior Thesis.....	1
Ch 171 Inorg. Chem. Lab....	1	CC Christian Culture.. 2 (0)	
Ch 199a Senior Thesis.....	1	Gr 34 Scientific German....	3
Gr 33 Scientific German....	3	Pl 132 Pers., Social Ethics... 3	
Pl 131 Prin. of Ethics.....	3	Pl 105, 106, 107 or 133.....	3
Total.....	14	Total.....	15 or 18

*If a student has advanced standing in algebra and trigonometry, he may register for Mt 60: Calculus. Otherwise the math sequence begins with Mt 31. Courses labelled Upper Division Mathematics are selected with the approval of adviser.

†Students (except those who have completed En 14) may substitute En 34: Studies in the Novel for either En 31 or 32.

THE BACHELOR OF SCIENCE (Communication Arts)

Communication Arts (CA) seeks to develop effective and responsible communication habits in the student as a social being. Emphasis is placed upon instruction and research in the major functions and forms of discourse important to man as a human being and citizen, to prepare him for everyday situations involving both large and small social contacts.

The program is designed to increase the student's knowledge of communication, its principles, techniques, problems, and results; to develop understanding of himself and others both as communicators and communicatees; to make him conscious of the responsibility and potential impact of communications on society; to increase his awareness of the environment in which communication takes place; and to heighten his competence in communicating with others and in assisting others to communicate more effectively. It leads to the Bachelor of Science degree (or of Arts, if two years of college Latin are completed).

Requirements for a major are completion of CA 1 and 20 as an introduction to upper division work; twenty-five hours in upper division courses including CA 101, 120, 123 and thirteen hours of CA electives. Electives should be confined to one area of concentration. Areas of concentration are Film,* Journalism,* Public Address (speech), Public Relations, Radio-Television, and Theatre. When certain areas are closely related, however, crossover to a related area is recommended.

Departmental recommendations for a minor include completion of CA 1 and 20; completion of thirteen credit hours in upper division work including CA 101.

Comprehensive exams and a performance project complete the requirements for a major.

Specific degree requirements follow:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Communication Arts	5	25	Military Science	6	—
Minor	5	13	Modern Language	6-12	—
English	12	—	Philosophy	3	15
Christian Culture	—	8	Psychology	3	—
History	6	—	Theology	8	—
Mathematics	6	—	Science	8	—

*Students concentrating in Film or in Journalism may substitute an elective for CA 20.

B.S. (Communication Arts)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
En 3 English Comp.	3	En 4 English Comp.	3
CA 1 Oral Communication	2	CA 20 Voice and Diction	3
ML 1 Elementary	3	ML 2 Elementary	3
MS 1 First Year Basic	1	MS 2 First Year Basic	1
Th 40 Christ in the Gospels	2	Th 41 Christ, Our Redeemer	2
Science	4	Science	4
Total	15	Total	16

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
En 31 Studies in Poetry*	3	En 32 Studies in Drama*	3
CA 122 Com. Theory	3	CA 101 Oral Interpretation	3
Hs 7 Europe to 1648	3	Hs 8 Europe since 1648	3
ML 31 Intermediate	3	ML 32 Intermediate	3
MS 31 Second Year Basic	2	MS 32 Second Year Basic	2
Th 42 Christ in His Church	2	Th 43 Christ in the Soul	2
		Pl 34 Logic	3
Total	16	Total	19

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
CA 120 Survey of Mass Communications	3	CA 123 Social Dynamics of Communications	3
CA Elective	2	CA Elective	3
Minor	3	Minor	3
Pl 111 Phil. Psychology	3	Christian Culture	3
Ps 31 Gen. Psychology	3	Pl 100 Metaphysics	3
So 125 Marriage	2		
Total	16	Total	15

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
CA Elective	3	CA Elective	3
CA Elective	2	Minor	3
Elective (any course at all)	2	Mt 12 College Math. II	3
Minor	3	Pl 105, 106 or 133	3
Mt 11 College Math. I	3	Pl 132 Pers. Social Ethics	3
Pl 131 Prin. of Ethics	3		
Total	16	Total	15

*Students (except those who have completed En 14) may substitute En 34: Studies in the Novel, for either En 31 or En 32.

THE BACHELOR OF SCIENCE (Economics)

A Bachelor of Science degree in economics is offered those who wish to take the traditional liberal arts program. The curriculum of an economics major is designed to satisfy the student's desire for a broad liberal arts background, and to provide a general, but thorough, understanding and appreciation of economic activity.

Students majoring in economics must complete these specific courses:

Course No.	Subject	Sem. Hrs.
Ec 33, 34	Principles of Economics	6
Ec 118	Mathematics for Economists	3
Ec 130	Labor Economics	3
Ec 133	Microeconomic Analysis	3
Ec 134	Macroeconomic Analysis	3
Ec 139	History of Economic Thought	3
Ec 145	International Economics	3
Ec 150	Money and Banking	3
Ec 190	Business Statistics	3
Total		30

Prescribed subjects and credit hours required for the B.S. (Economics) follow:

Sem. Hrs.		Sem. Hrs.	
Subject	L.D. U.D.	Subject	L.D. U.D.
Economics	6 24	Military Science	6 —
Minor	6 12	Philosophy	3 15
Christian Culture	— 8	Theology	8 —
English	12 —	Science	8 —
History	6 —	Speech	2 —
Mathematics*	6 3		
Modern Language...6-12†	—		

†Six hours of modern language suffice if student is explicitly exempted by the Department of Modern Languages from ML 1, 2.

*For candidacy in the Department, student must have completed the requirements for Mt 21 and Ec/Mt 40.

B.S. (Economics)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
En 3 English Comp.	3	En 4 English Comp.	3
Hs 7 Europe to 1648	3	Hs 8 Europe since 1648	3
Mt 21 Math. of Economics	3	Ec/Mt 40 Calculus of One Variable	3
Th 40 Christ in the Gospels	2	Th 41 Christ, Our Redeemer	2
Science	4	Science	4
MS 1 First Year Basic	1	MS 2 First Year Basic	1
Total	16	Total	16

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ec 33 Prin. of Economics	3	Ec 34 Prin. of Economics	3
En 31 Studies in Poetry†	3	En 32 Studies in Drama†	3
Elective	3	ML 2	3
ML 1	3	Pl 34 Logic	3
Th 42 Christ in His Church	2	Th 43 Christ in the Soul	2
MS 31 Second Year Basic	2	MS 32 Second Year Basic	2
Total	16	Total	16

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ec 133 Micro. Economics	3	Ec 134 Macro. Economics	3
Ec 118 Math. for Economists	3	Ec 139 Hist. of Econ. Thought	3
Minor	3	Ec 190 Business Statistics	3
ML 31	3	Minor	3
Pl 111 Phil. Psychology	3	ML 32	3
So 125 Marriage	2	Pl 100 Metaphysics	3
Total	17	Total	18

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
CA 1 Prin. of Speech	2	Pl 132 Pers. and Soc. Ethics	3
Ec 150 Money and Banking	3	Ec 145 International Econ.	3
Minor	3	Minor	3
Pl 131 Prin. of Ethics	3	Pl 105, 106, 107 or 133	3
CC/Ec 132 Advised	3	Ec 130 Labor Economics	3
Total	14	Total	15

†Students (except those who have completed En 14) may substitute En 34: Studies in the Novel for either En 31 or 32.

TEACHER CERTIFICATION

The courses in education, planned to provide the required preparation for teaching in secondary schools, are open to students majoring in any department.

The minimum professional requirements for high school certification in Ohio are:

1. For the teaching of any subject: Ed 31, 41, 101, 102, 103, and a two-hour elective in education. (The physical education major already includes this elective.) These courses constitute a minor in education.
2. For teaching health and physical education: Bl 9, 10, Ed 161, 162, 163, 164, 165, 166, 167, 168, 169, 171, and 172. Ed 169, 160, and 173 may be used as open electives and are recommended. These courses, together with those listed under 1, above, constitute a major in physical education, and lead to the Bachelor of Science.
3. For teaching other subjects (history, English, etc.), the student must consult the specific state requirements for each subject. Copies of these requirements may be secured in the Teacher Education and Placement Office, 14 Alter Hall.

Each student must be formally accepted in writing into the teacher education program before he takes his first course in education. This acceptance is given in the Teacher Education and Placement Office, 14 Alter Hall. Prior to the semester in which he plans to do student teaching, he must receive formal acceptance from the Director of Student Teaching, 14 Alter Hall.

Students in the Physical Education program must complete the same two steps in the Physical Education Office, in the Fieldhouse.

Students desirous of meeting professional requirements of other states, should obtain an official statement of specific requirements from the Department of Education of their respective states, and consult the Teacher Education and Placement Office before registering for courses in education.

THE BACHELOR OF SCIENCE (Physical Education)

The minimum program requirements for the Bachelor of Science in Physical Education are:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Education.....	6	30	Modern Language... 6-12	—	—
Minor.....	6	12	or Mathematics... 6	—	—
Christian Culture....	—	8	Philosophy.....	3	15
English.....	12	—	Psychology.....	3	—
History.....	6	—	Science (Bl 9, 10)....	6	—
Military Science.....	6	—	Speech.....	2	—
			Theology.....	8	—

B.S. (Physical Education)

Freshman Year			
First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Bl 9 Human Anatomy*....	3	Bl 10 Human Anatomy*....	3
En 3 English Comp.....	3	En 4 English Comp.....	3
Es 7 Europe to 1648.....	3	Es 8 Europe since 1648....	3
Mt 11 or 21; or ML†.....	3	Mt 12 or 22; or ML†.....	3
MS 1 First Year Basic.....	1	MS 2 First Year Basic.....	1
Th 40 Christ in the Gospels..	2	Th 41 Christ, Our Redeemer..	2
Total.....	15	Total.....	15

Sophomore Year			
First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ps 31 Gen. Psychology*....	3	Pl 34 Logic*.....	3
Ed 31 Prin. of Education....	3	Ed 41 Ed. Psychology.....	3
Ed 161 Admin. of Phys. Ed....	3	Ed 162 Admin. of Health Ed..	3
Ed 167 Health and Hygiene... 2		Ed 168 Health and Hygiene... 2	
En 31 Studies in Poetry†....	3	En 32 Studies in Drama†....	3
MS 31 Second Year Basic.....	2	MS 32 Second Year Basic....	2
Th 42 Christ in His Church... 2		Th 43 Christ in the Soul....	2
Total.....	18	Total.....	18

Junior Year			
First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
So 125 Marriage.....	2	Christian Culture.....	2
Ed 101 Secondary Methods... 2		Ed 102 Secon. Curriculum....	2
Ed 163 Phys. Ed.: Methods, Materials.....	2	Ed 164 Phys. Ed.: Methods, Materials.....	2
Minor.....	3	Minor.....	3
Pl 111 Phil. Psychology.....	3	Pl 100 Metaphysics.....	3
Teaching Field.....	3	Teaching Field.....	3
Elective.....	2		
Total.....	17	Total.....	15

Senior Year			
First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ed 103 Stud. Teaching.....	6	Ed 169 Practicum: Community Rec.....	2
Ed 165 Coaching: Football... 1		Ed 171 Coaching: Baseball... 1	
Ed 166 Coaching: Basketball. 1		Ed 172 Coaching: Track, Field 1	
CA 1 Prin. of Speech.....	2	Minor.....	6
Pl 131 Prin. of Ethics.....	3	Pl 105, 106, 107, or 133....	3
Christian Culture.....	2	Pl 132 Pers., Social Ethics... 3	
Total.....	15	Total.....	16

*Bl 9 and 10 will be offered every other year alternating with Ps 31 and Pl 34 in the freshman-sophomore program.

†Students (except those who have completed En 14) may substitute En 34: Studies in the Novel for either En 31 or 32.

‡Degree requirements give the student a choice of six hours of mathematics or six to twelve hours of modern language.

THE BACHELOR OF SCIENCE (Teaching Science or Mathematics)

This degree is designed for high school teaching of science or mathematics to meet state requirements (1) for the teaching areas of chemistry and mathematics; (2) for physics and mathematics; (3) for general science and mathematics; (4) for biology and general science; and (5) for the science comprehensive teaching area with principal emphasis on physics or biology or chemistry.

Students desiring to teach, who so choose, may meet requirements for the Bachelor of Science degrees with full majors in the individual sciences or mathematics providing they include the appropriate 18 semester hours in education. Their program will ordinarily extend beyond the eight semesters required for bachelor's degrees. Students following the B.S. (Teaching Science or Mathematics) will ordinarily not have completed the major prerequisites for entrance to graduate studies in any one science or in mathematics.

1. For teaching chemistry and mathematics:

Chemistry (Courses listed under 5—c below)	24 hours
Mathematics	18
Education	18
Remainder of required courses, minimum	68
Total	128

The eighteen hours of mathematics courses required will consist of Mt 31: Algebra and Trigonometry, 3 credit hours; Mt 45: Vectors and Geometry, 3 credit hours; Mt 60, 61: Calculus I, II, 6 credit hours; Mt 124: Mathematical Statistics I, 3 credit hours; and Mt 130: Theory of Numbers, 3 credit hours. If the student has already completed Mt 31, he may take another three-hour mathematics course as suggested by his adviser.

Ch 3, 4 in this program is the eight-hour freshman chemistry course.

2. For teaching physics and mathematics:

Physics (Courses listed under 5—a below)	24 hours
Mathematics	18
Education	18
Remainder of required courses, minimum	68
Total	128

The eighteen hours of mathematics courses required will consist of Mt 31: Algebra and Trigonometry, 3 credit hours; Mt 45: Vectors and Geometry, 3 credit hours; Mt 60-61: Calculus I and II, 6 credit hours; Mt 107: Introduction to Infinite Series, 3 credit hours; and Mt 109: Advanced Calculus I, 3 credit hours. If the student has already completed Mt 31, he should take Mt 110: Advanced Calculus II, 3 credit hours, or Mt 144: Matrices and Vector Spaces, 3 credit hours.

3. For teaching general science and mathematics:

Biology (Bl 3, 4: General Zoology 4/4)	8 hours
Chemistry (Ch 3, 4: General Chemistry 4/4)	8
Physics (Ph 3, 4: College Physics 4/4)	8
Mathematics	18
Education	18
Remainder of required courses, minimum	68
Total	128

The eighteen hours of mathematics courses required will consist of Mt 31: Algebra and Trigonometry, 3 credit hours; Mt 45: Vectors and Geometry, 3 credit hours; Mt 60, 61: Calculus I, II, 6 credit hours; and one Topics course (in the senior year or after the completion of six hours of Calculus I and II), 6 credit hours.

4. For teaching biology and general science:

Biology (Courses listed under 5—b below)	24 hours
Chemistry (Ch 3, 4: General Chemistry 4/4)	8
Physics (Ph 3, 4: College Physics 4/4)	8
Mathematics (Mt 11, 12: College Mathematics I, II, 3/3)	6
Education	18
Remainder of required courses, minimum	64
Total	128

5. For the science comprehensive teaching area:

One science (physics, biology, chemistry)	24 hours
Each of the other two sciences (8 hours each)	16
Mathematics	6*
Education	18
Remainder of required courses, minimum	64
Total	128

The six hours of mathematics will consist of Mt 31: Algebra and Trigonometry, or Mt 60, 61: Calculus I, II, 6 credit hours, if the student has had Mt 31 or the equivalent when he enters the program. (Students choosing physics as their principal teaching field should also take Mt 107: Introduction to Infinite Series, 3 credit hours, and Mt 109: Advanced Calculus I, 3 credit hours.)

a) If the principal science is physics, the following 24-hour pattern will be followed:

Ph 9, 10 Univ. Physics I, II	3/3 hours
Ph 11, 12 Elec. Circuit, Electronics	4/4
Ph Upper Division physics as determined by the Department	10
Total	24

The student will also include Bl 3, 4: General Zoology, 8 credit hours; and Ch 3, 4: General Chemistry, 8 credit hours.

b) If the principal teaching area is biology, the following 24-hour pattern will be followed:

Bl 3, 4 General Zoology	4/4 hours
Bl 105 Botany	4
Bl 152 Genetics	2
Bl 161 General Physiology	4
Biology electives (upper division)	6
Total	24

The student will also include Ch 3, 4: General Chemistry, 8 credit hours; and Ph 3, 4: College Physics, 8 credit hours.

c) If the principal teaching area is chemistry, the following 24-hour pattern will be followed:

Ch 3, 4 General Chemistry	4/4 hours
Ch 101-02 Organic Chemistry	4/4
Ch 51 Quant. Inorg. Analysis	4
Ch 121 Elem. Physical Chemistry (No lab.)	3
Chemistry elective	1
Total	24

The student will also include Bl 3, 4: General Zoology, 8 credit hours; and Ph 3, 4: College Physics, 8 credit hours.

THE BACHELOR OF SCIENCE (English)

The Department of English offers training in composition, in the literature of England and of America, in literary backgrounds, and in criticism. The program results in cultural enrichment and in numerous vocational possibilities. It leads to the Bachelor of Science (or of Arts if two years of college Latin are completed).

The following is a regulation passed by the Academic Council:

The violation of any of the ESSENTIALS FOR WRITING (list submitted by the Department of English) in term papers or reports submitted by students to any professor must be penalized by a reduction in grade. Any unsatisfactory term paper or report submitted to any professor must be returned for re-writing and must be automatically penalized by the reduction of one letter in grading, e.g., a B paper automatically becomes a C paper.

Although En 3, 4: English Composition fulfills the English requirements of all students in the University in freshman year, freshmen who intend to major in English ought to enroll in En 13, 14: Rhetoric and Literature. Sophomore English majors must take En 31, 32, and they ought to register for the higher intensity sections of these courses as noted on the schedules for each semester. En 31, 32 or their equivalent are prerequisite for any *upper division* course.

At the *upper division* level majors must complete the Survey of English Literature to 1750, the Survey of English Literature Since 1750, the Survey of American Literature, Shakespeare, and one other course in American literature. They must also include an elective course in the English, the American, or the modern novel; another in the modern drama, modern poetry, or the short story; and at least one other course: Chaucer, Milton, Seventeenth Century Literature, Eighteenth Century Literature, the Romantic Movement, Victorian Poetry, or British Prose of the Nineteenth Century. Students planning to teach high school English must include En 101: Advanced Writing. This may replace an elective course. During their junior and senior years majors must work with an assigned member of the department to prepare for the senior comprehensive examination, which is required for graduation.

Minors must take En 140, 141, 180, and one other course of their own choosing, except En 111.

A summary of the curriculum follows:

Sem. Hrs.		Sem. Hrs.	
Subject	L.D. U.D.	Subject	L.D. U.D.
English.....	12 24	Philosophy.....	3 15
Minor.....	6 12	Psychology.....	3 —
Christian Culture....	— 8	Theology.....	8 —
History.....	6 —	Science.....	8 —
Mathematics.....	6 —	Speech.....	2 —
Modern Language...6-12	—	Elective.....	— 6
Military Science.....	6 —		

B.S. (English)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
En 13 Rhetoric and Lit.....	3	En 14 Rhetoric and Lit.....	3
Hs 7 Europe to 1648.....	3	Hs 8 Europe since 1648....	3
ML 1 Elem.....	3	ML 2 Elem.....	3
MS 1 First Year Basic.....	1	MS 2 First Year Basic.....	1
Th 40 Christ in the Gospels..	2	Th 41 Christ, Our Redeemer..	2
Science.....	4	Science.....	4
Total.....	16	Total.....	16

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
En 31 Studies in Poetry*....	3	En 32 Studies in Drama*....	3
Mt 11 College Math. I.....	3	Mt 12 Colleg Math. II.....	3
ML 31 Inter.....	3	ML 32 Inter.....	3
MS 31 Second Year Basic....	2	MS 32 Second Year Basic....	2
Ps 31 Gen. Psychology.....	3	Pl 34 Logic.....	3
Th 42 Christ in His Church..	2	Th 43 Christ in the Soul....	2
Total.....	16	Total.....	16

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
So 125 Marriage.....	2	Christian Culture.....	2
En 142 Survey, Eng. Lit to 1750.....	3	Pl 105, 106, 107, or 133....	3
En 150 Shakespeare.....	3	En 143 Survey, Eng. Lit. since 1750.....	3
CA 1 Prin. of Speech.....	2	En 180 Survey, Amer. Lit....	3
Minor.....	3	Minor.....	3
Pl 111 Phil. Psychology.....	3	Pl 100 Metaphysics.....	3
Total.....	16	Total.....	17

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Christian Culture.....	2	Pl 132 Pers., Social Ethics...	3
En Elective.....	6	En Elective.....	6
Minor.....	3	Minor.....	3
Pl 131 Prin. of Ethics.....	3	Elective.....	3
Elective.....	3		
Total.....	17	Total.....	15

*Students planning to major in English must register for HIP Sections of En 31, 32.

THE BACHELOR OF SCIENCE (History)

The Bachelor of Science is conferred on the student who majors in history. This program requires eight semester courses beyond Hs 7 and 8, which are prerequisite to all *upper division* work, and includes of necessity Hs 141 and 142, and Hs 194 which must be taken by all history majors in the second semester of their senior year.

History is studied as a liberal art for its primary value of educating one toward proper appreciation of human living. Its memory of man and its insistence on accurate detail, on proof, and on the relation of cause and effect cultivate habits of mature judgment. It helps toward developing due respect and sympathy for others, and supreme regard for the final purpose of life.

A Senior Comprehensive Examination, based on assigned readings, is required.

Specific degree requirements follow:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
History.....	6	24	Modern Languages..	6-12	—
Minor.....	6	12	Military Science.....	6	—
Christian Culture....	—	8	Philosophy.....	3	15
Economics*.....	3	—	Science.....	8	—
English.....	12	—	Speech.....	2	—
Mathematics.....	6	—	Theology.....	8	—

*Students minoring in psychology or intending to teach should substitute Ps 31 for economics.

B.S. (History)

Freshman Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
En 3	English Comp.....	3	En 4	English Comp.....	3
Hs 7	Europe to 1648.....	3	Hs 8	Europe since 1648....	3
ML 1	Elem.....	3	ML 2	Elem.....	3
MS 1	First Year Basic.....	1	MS 2	First Year Basic.....	1
Th 40	Christ in the Gospels..	2	Th 41	Christ, Our Redeemer..	2
Science.....		4	Science.....		4
Total.....		16	Total.....		16

Sophomore Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
En 31	Studies in Poetry*....	3	En 32	Studies in Drama*....	3
Hs 141	U. S. to 1865.....	3	Hs 142	U. S. Since 1865.....	3
Mt 11	College Math. I.....	3	Mt 12	College Math. II.....	3
ML 31	Interm.....	3	ML 32	Interm.....	3
MS 31	Second Year Basic....	2	MS 32	Second Year Basic....	2
Th 42	Christ in His Church..	2	Pl 34	Logic.....	3
Total.....		16	Total.....		17

Junior Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
So 125	Marriage.....	2	Christian Culture.....		2
Ec 33	Prin. of Economics... 3		Elective.....		3
Hs	Elective.....	6	Hs	Elective.....	6
Minor.....		3	Minor.....		3
Pl 111	Phil. Psychology.....	3	Pl 100	Metaphysics.....	3
			Th 43	Christ in the Soul....	2
Total.....		17	Total.....		19

Senior Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
Christian Culture.....		2	Pl 132	Pers., Social Ethics... 8	
CA 1	Prin. of Speech.....	2	Hs 194	Historical Crit.....	3
Hs	Elective.....	6	Hs	Elective.....	3
Minor.....		3	Elective.....		3
Pl 131	Prin. of Ethics.....	3	Minor.....		3
			Pl 105, 106, 107, or 133.....		3
Total.....		16	Total.....		18

*Students (except those who have completed En 14) may substitute En 34: Studies in the Novel for either En 31 or 32.

THE BACHELOR OF SCIENCE (Mathematics)

The Department of Mathematics offers a program intended to develop exact methods of thought and analysis, provide the mathematical background for work in science and business, and prepare students for teaching and for graduate work.

Sophomores wishing to major in mathematics should have a quality point average of 2.5 or better in Mt 45, 60, and 61. Any student wishing to major in mathematics should consult a member of the mathematics staff before registration.

A minor in mathematics consists of 6-15 hours of *lower division* courses and 6 hours of *upper division* courses.

The program is summarized:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Mathematics.....	9-12	27	Military Science.....	6	—
Minor*.....	6	12	Modern Language...6-12	—	—
Science.....	8	—	Philosophy.....	3	15
Christian Culture....	—	8	Psychology.....	3	—
English.....	12	—	Speech.....	2	—
History.....	6	—	Theology.....	8	—

*The minor may be in such fields as physics, accounting, or economics, and must conform to the requirements of those departments.

B.S. (Mathematics)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
En 3 English Comp.....	3	En 4 English Comp.....	3
ML 1 Elem.....	3	ML 2 Elem.....	3
Pl 34 Logic.....	3	Mt 45 Vectors and Geom....	3
Mt 60 (or 31).....	3	Mt 61 (or 60).....	3
Hs 7 Europe to 1648.....	3	Hs 8 Europe since 1648....	3
MS 1 First Year Basic.....	1	MS 2 First Year Basic.....	1
Th 40 Christ in the Gospels..	2	Th 41 Christ, Our Redeemer..	2
Total.....	18	Total.....	18

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
En 31 Studies in Poetry*....	3	En 32 Studies in Drama*....	3
ML 31 Interm.....	3	ML 32 Interm.....	3
Mt 107 Intro. to Infin. Series	3	Mt 109 Adv. Calculus I.....	3
(or 61).....	3	Science.....	4
Science.....	4	MS 32 Second Year Basic....	2
MS 31 Second Year Basic....	2	Th 43 Christ in the Soul....	2
Th 42 Christ in His Church..	2	Total.....	17
Total.....	17	Total.....	17

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
So 125 Marriage.....	2	Pl 105, 106, 107, or 133....	3
Pl 111 Phil. Psychology.....	3	Pl 100 Metaphysics.....	3
CA 1 Prin. of Speech.....	2	Ps 31 Gen. Psychology.....	3
Mt 110 Adv. Calculus II.....	3	Mt 145 Modern Algebra.....	3
Mt 144 Matrices, Vect. Spaces	3	Minor.....	3
Minor.....	3	Total.....	15
Total.....	16	Total.....	15

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Christian Culture.....	2	Christian Culture.....	2
Pl 131 Prin. of Ethics.....	3	Pl 132 Pers., Social Ethics... 3	
Mt Elective.....	3	Mt Elective.....	3
Mt 181 Elem. Topology.....	3	Mt 158 Interm. Analysis....	3
Minor.....	3	Minor.....	3
Total.....	14	Total.....	14

*Students (except those who have completed En 14) may substitute En 34: Studies in the Novel for either En 31 or 32.

THE BACHELOR OF SCIENCE (Modern Languages)

The Department of Modern Languages offers programs leading to the Bachelor of Science in French, German, or Spanish. The aim of the department is to teach the language as a means of introducing the student to another culture.

To prepare for the senior comprehensive examination, which is a requirement for graduation, majors and minors will work during the junior and senior years with an assigned member of the department.

An outline of the curriculum follows:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
French, German, Russian* or Spanish	12	21	Military Science.....	6	—
Minor.....	6	12	Philosophy.....	3	15
Christian Culture....	—	8	Psychology.....	3	—
English.....	12	—	Science.....	8	—
History.....	6	—	Speech.....	2	—
Mathematics.....	6	—	Theology.....	8	—
			Electives.....	—	9

*Only lower division courses are offered in Russian.

B.S. (Modern Languages)

Freshman Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
En 3	English Comp.....	3	En 4	English Comp.....	3
Hs 7	Europe to 1648.....	3	Hs 8	Europe since 1648....	3
ML 1	Elem.....	3	ML 2	Elem.....	3
MS 1	First Year Basic.....	1	MS 2	First Year Basic.....	1
Th 40	Christ in the Gospels..	2	Th 41	Christ, Our Redeemer..	2
Science.....		4	Science.....		4
Total.....		16	Total.....		16

Sophomore Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
En 31	Studies in Poetry*....	3	En 32	Studies in Drama*....	3
Mt 11	College Math. I.....	3	Mt 12	College Math. II.....	3
ML 31	Interm.....	3	ML 32	Interm.....	3
MS 31	Second Year Basic....	2	MS 32	Second Year Basic....	2
Ps 31	Gen. Psychology.....	3	Pl 34	Logic.....	3
Th 42	Christ in His Church..	2	Th 43	Christ in the Soul....	2
Total.....		16	Total.....		16

Junior Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
So 125	Marriage.....	2	Christian Culture.....		2
Minor.....		3	Minor.....		3
Fr 101, Gr 101, Sp 101.....		3	Electives.....		3
Fr 132, Gr 132, Sp 132.....		3	Fr 133, Gr 133, Sp 133.....		3
Pl 111	Phil. Psychology.....	3	Pl 105, 106, 107, or 133.....		3
Elective.....		3	Pl 100	Metaphysics.....	3
Total.....		17	Total.....		17

Senior Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
CA 1	Prin. of Speech.....	2	Pl 132	Pers., Social Ethics... 3	
Christian Culture.....		2	Major Elective.....		3
Electives.....		3	Minor.....		3
Major Elective.....		3	Elective.....		3
Minor.....		3	Major Elective.....		3
Pl 131	Prin. of Ethics.....	3			
Total.....		16	Total.....		15

*Students (except those who have completed En 14) may substitute En 34: Studies in the Novel for either En 31 or 32.

THE BACHELOR OF SCIENCE (Philosophy)

The Bachelor of Science in philosophy is conferred on students who major in philosophy and complete two minors. One minor must be in English, history, a modern language, or a classical language. (Latin qualifies the candidate for the Bachelor of Arts.) The second minor is unspecified.

Students are encouraged to include French and Latin if possible because of their value for advanced study in philosophy.

Departmental requirements in philosophy follow:

- A. For all students working for any degree: Pl 34, 100, 111, 131, 132, and one of the following electives: Pl 105, 106, 107, 133.
- B. For a major: Pl 34, 100, 106, 107, 111, 131, 132, 133, 151, 161, 199a and b.

Majors in philosophy will come to a recognition of the unity of knowledge and of the nature of mental life and its processes. They will gain the power of reasonable criticism, a realization of the dignity of human nature, and an illumination of the rational foundation of religion.

A summary of the program follows:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Philosophy.....	3	29	Modern Language....	6-12	—
Minor 1.....	6	12	Military Science.....	6	—
Minor 2.....	6	12	Psychology.....	3	—
Christian Culture....	—	8	Science.....	8	—
English.....	12	—	Speech.....	2	—
History.....	6	—	Theology.....	8	—
Mathematics.....	6	—	Electives.....	—	9

B.S. (Philosophy)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
En 3 English Comp.....	3	En 4 English Comp.....	3
Hs 7 Europe to 1648.....	3	Hs 8 Europe since 1648....	3
ML 1 Elem.....	3	ML 2 Elem.....	3
MS 1 First Year Basic....	1	MS 2 First Year Basic....	1
Th 40 Christ in the Gospels..	2	Th 41 Christ, Our Redeemer.	2
Science.....	4	Science.....	4
Total.....	16	Total.....	16

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
En 31 Studies in Poetry*....	3	En 32 Studies in Drama*....	3
ML 31 Interim.....	3	Mt 11 College Math. I.....	3
MS 31 Second Year Basic....	2	ML 32 Interim.....	3
Pl 34 Logic.....	3	MS 32 Second Year Basic....	2
Pl 111 Phil. Psychology.....	3	Pl 100 Metaphysics.....	3
Th 42 Christ in His Church..	2	Th 43 Christ in the Soul....	2
Total.....	16	Total.....	16

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
So 125 Marriage.....	2	Elective.....	6
Mt 12 College Math. II....	3	Minors.....	6
Minors.....	6	Pl 106 Natural Theology....	3
Pl 151 or 161.....	3	Pl 133 Hist. Modern Phil....	3
Ps 31 Gen. Psychology.....	3		
Total.....	17	Total.....	18

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
CA 1 Prin. of Speech.....	2	Christian Culture.....	2
Minors.....	6	Electives.....	3
Pl 107 Phil. of Knowledge... 3		Minors.....	6
Pl 131 Prin. of Ethics.....	3	Pl 132 Pers., Social Ethics... 3	
Pl 151 or 161.....	3	Pl 199b Senior Comp. Rev.... 1	
Pl 199a Senior Comp. Rev.... 1			
Total.....	18	Total.....	15

*Students (except those who have completed En 14) may substitute En 34: Studies in the Novel for either En 31 or 32.

THE BACHELOR OF SCIENCE (Physics)

The Department of Physics offers a curriculum leading to the Bachelor of Science in physics.

The educational benefits to be derived from a study of the science of physics are training in scientific method, acquaintance with the historical development of physical science, and a knowledge of the applications of physical laws which play so large a part in modern life. In all physics courses emphasis is laid on the intelligent comprehension of basic principles rather than on study of outmoded applications.

All physics majors are required to take a minimum of 46 semester hours of physics. These hours must include Ph 111, 112, Ph 141, 142, and Ph 164, 165 or 166, six hours of Advanced Laboratory, and fourteen hours of University Physics.

Physics minors must take a minimum of twenty semester hours which include the eight-hour general physics course, and three hours of Mechanics.

A working knowledge of algebra and trigonometry is assumed of freshman physics majors. Deficiencies in this area should be removed before the start of freshman course work. Such mathematics courses are regularly offered in the summer sessions.

With approval of the Departments of Chemistry and of Physics six credit hours in physical chemistry may be counted toward a major in physics.

In cooperation with the Graduate School, the Department of Physics offers the following sequence of courses for teachers or prospective teachers who wish to obtain a concentration in physics: Ph 162, 174, 175, 176, and 177.

The minimum requirements follow:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Physics.....	14	32	Military Science.....	6	—
Mathematics.....	6-9	9	Modern Language... 6-12	—	—
Chemistry.....	8	—	Philosophy.....	3	15
Christian Culture....	—	8	Speech.....	2	—
English.....	12	—	Theology.....	8	—
History.....	6	—			

B.S. (Physics)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ch 3 General Chemistry...	4	Ch 4 General Chemistry...	4
En 3 English Comp.....	3	En 4 English Comp.....	3
Mt 60 Calculus I.....	3	Mt 61 Calculus II.....	3
CA 1 Prin. of Speech.....	2	Ph 10 Univ. Physics II.....	3
Ph 9 Univ. Physics I.....	3	Pl 84 Logic.....	3
MS 1 First Year Basic....	1	MS 2 First Year Basic....	1
Th 40 Christ in the Gospels..	2	Th 41 Christ, Our Redeemer..	2
Total.....	18	Total.....	19

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
En 31 Studies in Poetry†....	3	En 32 Studies in Drama†....	3
Ru 1 Elem.†.....	3	Ru 2 Elem.....	3
Mt 45 Vectors and Geom....	3	Mt 107 Intro. to Infin. Series.	3
MS 31 Second Year Basic....	2	MS 32 Second Year Basic....	2
Ph 11 Elec. Circuits, Lect., Lab.....	4	Ph 12 Electronics, Lect., Lab.	4
Th 42 Christ in His Church..	2	Th 43 Christ in the Soul....	2
Total.....	17	Total.....	17

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
So 125 Marriage.....	2	Ru 32 Intern.....	3
Ru 31 Intern.....	3	Mt 110 Adv. Calculus II.....	3
Mt 109 Adv. Calculus I.....	3	Pl 100 Metaphysics.....	3
Pl 111 Phil. Psychology....	3	Ph 102 Optics Lab.....	2
Ph 111 Theoret. Mechanics...	3	Ph 164 Atomic Physics.....	3
Ph 101 Mechanics Lab.....	2	Ph 142 Physical Optics.....	3
Ph 141 Electromagnetism....	3		
Total.....	19	Total.....	17

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Pl 190 Phil. and Science.....	3	Hs 8 Europe since 1648....	3
Hs 7 Europe to 1648.....	3	Pl 105, 106, 107, or 133....	3
Pl 131 Prin. of Ethics.....	3	Pl 132 Pers., Social Ethics...	3
Ph 165 Nuclear Physics and Fund. Particles.....	3	Ph 112 Theoretical Mech....	3
Ph 103 Atomic Phys. Lab....	1	Ph 104 Nuclear Physics Lab..	1
Ph Elective.....	3	Ph Elective.....	3
Ph 199a Senior Com. Rev....	1	Ph 199b Senior Comp. Rev....	1
Total.....	17	Total.....	17

†Students (except those who have completed En 14) may substitute En 34: Studies in the Novel for either En 31 or 32.

‡The student is advised to elect Russian or German.

THE BACHELOR OF SCIENCE (Political Science)

The Department of History and Political Science offers the Bachelor of Science in political science. The program demands seven courses beyond Po 1, 2 and includes as required Po 131, 132, 148, and 199.

Political science aims to produce a deep understanding of the functions and processes of political power, of the place of authority in society, of the use of freedom in human relations. Regard for institutional practice, to conserve freedom and employ sound social forces toward the perfecting of political action, is a prime purpose in the field. The American constitutional system will be given particular attention. A senior comprehensive examination is required.

A summary of the program follows:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Political Science.....	6	24	Military Science.....	6	—
Minor.....	6	12	Philosophy.....	3	15
Christian Culture.....	—	8	Psychology or		
English.....	12	—	Economics.....	3	—
History.....	6	—	Science.....	8	—
Mathematics.....	6	—	Speech.....	2	—
Modern Language...6-12	—	—	Theology.....	8	—

B.S. (Political Science)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
En 3 English Comp.....	3	En 4 English Comp.....	3
Hs 7 Europe to 1648.....	3	Hs 8 Europe since 1648....	3
ML 1 Elem.....	3	ML 2 Elem.....	3
Science.....	4	Science.....	4
Th 40 Christ in the Gospels..	2	Th 41 Christ, Our Redeemer..	2
MS 1 First Year Basic.....	1	MS 2 First Year Basic.....	1
Total.....	16	Total.....	16

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Po 1 Govt. in Society.....	3	Po 2 American Govt.....	3
En 31 Studies in Poetry*....	3	En 32 Studies in Drama*....	3
ML 31 Interim.....	3	ML 32 Interim.....	3
Ec 33 Prin. of Economics or		Pl 34 Logic.....	3
Ps 31 Psychology.....	3	Th 43 Christ in the Soul....	2
Th 42 Christ in His Church..	2	MS 32 Second Year Basic....	2
MS 31 Second Year Basic....	2		
Total.....	16	Total.....	16

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Po 131 Anc. and Med.		Po 132 Mod. Pol. Phil.....	3
Pol. Phil.....	3	Po Elective.....	3
Po Elective.....	3	Minor.....	3
Minor.....	3	Pl 100 Metaphysics.....	3
Pl 111 Phil. Psychology.....	3	Christian Culture.....	2
So 125 Marriage.....	2	Mt 12 College Math. II....	3
Mt 11 College Math. I.....	3		
Total.....	17	Total.....	17

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Po 148 Const. Hist. of U. S... 3		Po Elective.....	3
CA 1 Prin. of Speech..... 2		Po Elective.....	6
Minor..... 3		Minor.....	3
Pl 131 Prin. of Ethics..... 3		Pl 132 Pers., Social Ethics... 3	
CC Christian Culture..... 2		Pl 105, 106, 107, or 133.... 3	
Elective..... 3			
Total.....	16	Total.....	18

*Students (except those who have completed En 14) may substitute En 34: Studies in the Novel for either En 31 or 32.

THE BACHELOR OF SCIENCE (Psychology)

The Department of Psychology endeavors to acquaint students thoroughly with the content and methods of scientific psychology. While emphasizing the scientific approach in the understanding of human behavior and human personality, the psychology courses aim to show to the student that this branch of science is complementary to and compatible with a sound philosophy of human nature. In addition to the program leading to the Bachelor of Science in Psychology, the Department provides service courses to majors of other departments. The Bachelor of Science program in psychology aims to provide a general background for advanced studies in fields which presuppose understanding of human psychology such as clinical psychology, vocational and educational guidance, medicine, education, social work, and personnel work in business and industry.

Departmental requirements for a major are:

1. Completion of Ps 31 and 32 as an introduction to *upper division* work.
2. Twenty-seven credit hours in *upper division* courses including Ps 101, 102, 111, 138, 199.
3. Twelve credit hours in French or German, unless substitution of another foreign language is approved by the Chairman of the Department of Psychology.
4. Satisfactory completion of Bl 3 and 4 to fulfill the science requirement, unless substitution of other science courses is approved by the Chairman of the Department of Psychology.

Departmental requirements for a minor include:

1. Completion of Ps 31 and 32 or 41.
2. Completion of fifteen credit hours in *upper division* work including Ps 111.

A summary of program requirements follows:

Sem. Hrs.		Sem. Hrs.	
Subject	L.D. U.D.	Subject	L.D. U.D.
Psychology.....	6 27	Modern Language....	6-12 —
Minor.....	6 12*	Military Science.....	6 —
Christian Culture....	— 8	Philosophy.....	3 15
English.....	12 —	Theology.....	8 —
History.....	6 —	Science.....	8 —
Mathematics.....	6 —	Speech.....	2 —

*Minors in science are required to complete 16 hours.

B.S. (Psychology)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
En 3 English Comp.....	3	En 4 English Comp.....	3
Hs 7 Europe to 1648.....	3	Hs 8 Europe since 1648....	3
Mt 11 (or 31).....	3	Mt 12 (or 60).....	3
MS 1 First Year Basic.....	1	MS 2 First Year Basic.....	1
Th 40 Christ in the Gospels..	2	Th 41 Christ, Our Redeemer..	2
Bl 3 General Zoology.....	4	Bl 4 General Zoology.....	4
Total.....	16	Total.....	16

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
ML 1 Elem.....	3	ML 2 Elem.....	3
MS 31 Second Year Basic....	2	MS 32 Second Year Basic....	2
En 81 Studies in Poetry*....	3	En 32 Studies in Drama*....	3
Ps 81 Gen. Psychology.....	3	Ps 138 Statistical Techs....	3
Th 42 Christ in His Church..	2	Th 43 Christ in the Soul....	2
Pl 34 Logic.....	3	Ps 32 Adv. Gen. Psychology..	3
Total.....	16	Total.....	16

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
So 125 Marriage.....	2	Christian Culture.....	2
Minor.....	3	Minor.....	3
ML 31 Interm.....	3	ML 32 Interm.....	3
Ps 111 Phil. Psychology.....	3	Pl 100 Metaphysics.....	3
Ps 101 Experimental I.....	3	Ps 102 Experimental II.....	3
Ps Elective.....	3	Ps Elective.....	3
Total.....	17	Total.....	17

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
CA 1 Prin. of Speech.....	2	Christian Culture.....	2
Elective.....	3	Elective.....	3
Minor.....	3	Minor.....	3
Pl 131 Prin. of Ethics.....	3	Pl 105, 106, 107, or 133....	3
Ps Elective.....	7	Pl 132 Pers., Social Ethics...	3
Total.....	18	Ps 199 Senior Comp. Rev....	2
		Total.....	16

*Students (except those who have completed En 14) may substitute En 34: Studies in the Novel for either En 81 or 82.

THE BACHELOR OF SCIENCE (Natural Sciences)

(For Pre-Medical and Pre-Dental Students)

The curriculum for pre-medical and pre-dental students presents a liberal arts program with emphasis on those sciences required for an adequate background for subsequent studies in medicine, in dentistry, and in similar professions. Recurrent pronouncements by Committees on Admissions at professional schools leave no doubt that they regard an education in the liberal arts as one of the most important factors in forming a genuinely capable and effective professional man.

Pre-medical students are advised to plan a four year course.

If a student wishes to major in another area, he is free to do so. He should then seek advice from a member of the Committee for Pre-Medical and Pre-Dental Studies so that his selected course of studies will assure him of a degree and qualify him for admission to schools of medicine or dentistry.

The University proposes the following program:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Biology.....	8	10	Philosophy.....	3	15
Chemistry.....	13	11	Physics.....	8	—
Christian Culture....	—	8	Psychology.....	3	—
English.....	12	—	Science elective.....	—	3-6
German.....	6-12	—	Speech.....	2	—
History.....	6	—	Theology.....	8	—
Mathematics.....	6	—	Thesis.....	—	2
Military Science.....	6	—	Elective.....	3	—

With the approval of a member of the Committee for Pre-Medical and Pre-Dental Studies, some of the scientific requirements in the program outlined above may be modified to suit the needs of individual students.

B.S. (Natural Sciences) (For Pre-Medical and Pre-Dental Students)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Bl 3 Gen. Zoology....	4	Bl 4 Gen. Zoology.....	4
Ch 3 General Chemistry... 4		Ch 4 General Chemistry... 5	
En 3 English Comp..... 3		En 4 English Comp..... 3	
Mt 31 (or 11)..... 3		Mt 60 (or 12)..... 3	
MS 1 First Year Basic..... 1		MS 2 First Year Basic..... 1	
Th 40 Christ in the Gospels.. 2		Th 41 Christ, Our Redeemer.. 2	
Total.....	17	Total.....	18

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ch 51 Elem. Quan. Analysis. 4		Bl 152 Genetics..... 2	
Hs 7 Europe to 1648..... 3		Hs 8 Europe since 1648... 3	
MS 31 Second Year Basic.... 2		MS 32 Second Year Basic.... 2	
Ph 3 College Physics..... 4		Ph 4 College Physics..... 4	
Pl 34 Logic..... 3		Pl 111 Phil. Psychology.... 3	
Th 42 Christ in His Church.. 2		Ps 31 Gen. Psychology.... 3	
		Th 43 Christ in the Soul... 2	
Total.....	18	Total.....	19

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Bl 101 Compar. Anat. Vert.. 4		Bl 112 Gen., Vert. Embry... 4	
So 125 Marriage..... 2		Christian Culture..... 2	
Ch 101 Organic Chemistry... 4		Ch 102 Organic Chemistry... 4	
ML..... 3		ML..... 3	
Pl 100 Metaphysics..... 3		Pl 105, 106, 107, or 133.... 3	
CA 1 Prin. of Speech..... 2		Ch 190 Chem. Literature†... 1	
Total.....	18	Total.....	17

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ch 121 Elem. Phys. Chem. Lect..... 3		Ch 160 Biochem. Lecture (Optional)†..... 3	
En 31 Studies in Poetry*... 3		En 32 Studies in Drama*... 3	
ML..... 3		ML..... 3	
Pl 131 Prin. of Ethics..... 3		Pl 132 Pers., Social Ethics... 3	
Science..... 3-4		Science†..... 3-4	
Bl or Ch 199a Senior Thesis.. 1		Bl or Ch 199b Senior Thesis.. 2	
Total.....	16-17	Total.....	18-19

†Required of those who plan to concentrate in chemistry.

*Students (except those who have completed En 14) may substitute En 34: Studies in the Novel for either En 31 or 32.

†Required of those who plan to concentrate in biology.

PRE-DENTAL CURRICULUM

The Council on Dental Education of the American Dental Association fixes as the minimum basis for admission to an approved dental school the successful completion of two years in an accredited college of liberal arts and sciences. The course must include at least a year's credit in English, in biology, in physics, and in inorganic chemistry, and a semester's credit in organic chemistry. Courses in science should include both class and laboratory instruction. Formal credit in these subjects, except in chemistry or in English, may be waived in the case of exceptional students with three years of college credit or in the case of degree graduates of an accredited college.

The applicant must also have graduated from an accredited four year high school, which requires not less than fifteen units.

Only young men in good physical condition should seek entrance into the dental schools. As a requirement for admission a prospective student must furnish a certificate of health from a physician. This must include a report on a chest x-ray, satisfactory condition of heart, of eyes, and of the motor system.

Since entrance requirements vary, the student should decide early upon the school he wishes to attend and should plan his program to conform to its requirements. Rarely is one who presents only minimum academic preparation accepted unless his work has been of superior quality. Fulfillment of the requirements for the Bachelor's degree is advisable.

A summary of *minimum* requirements follows:

Subject	Sem. Hrs.	Subject	Sem. Hrs.
Biology.....	8	Military Science.....	6
Chemistry.....	21	Philosophy.....	6
English.....	6	Physics.....	8
History.....	6	Theology.....	8
Mathematics.....	6		

Pre-Dental (Three-Year Course)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Bl 3 General Zoology.....	4	Bl 4 General Zoology.....	4
Ch 3 General Chemistry...	4	Ch 4 General Chemistry...	5
En 3 English Comp.....	3	En 4 English Comp.....	3
MS 1 First Year Basic.....	1	MS 2 First Year Basic.....	1
Mt 60 (or 31).....	3	Mt 61 (or 60).....	3
Th 40 Christ in the Gospels..	2	Th 41 Christ, Our Redeemer..	2
Total.....	17	Total.....	18

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ch 51 Elem. Quan. Analysis..	4	Hs 8 Europe since 1648....	3
Hs 7 Europe to 1648.....	3	MS 32 Second Year Basic....	2
MS 31 Second Year Basic....	2	Pl 100 Metaphysics.....	3
Ph 3 College Physics.....	4	Pl 111 Phil. Psychology....	3
Pl 34 Logic.....	3	Ph 4 College Physics.....	4
Th 42 Christ in His Church..	2	Ps 31 Gen. Psychology....	3
Total.....	18	Th 43 Christ in the Soul....	2
		Total.....	20

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Bl 101 Comp. Anat. of Vert..	4	Ch 102 Organic Chemistry...	4
So 125 Marriage.....	2	En 32 Studies in Drama*....	3
Ch 101 Organic Chemistry...	4	CA 1 Prin. of Speech.....	2
En 31 Studies in Poetry*....	3	Pl 132 Pers., Social Ethics...	3
Pl 131 Prin. of Ethics.....	3	Elective.....	3-4
Total.....	16	So 126 Family.....	2
		Total.....	17-18

*Students (except those who have completed En 14) may substitute En 34: Studies in the Novel for either En 31 or 32.

PRE-LEGAL STUDY

Though many law schools admit students after three years of undergraduate study, Ohio law schools and certain others require four years of college work. All students who intend to take the Ohio Bar Examination must have a college degree before beginning the study of law.

American law schools do not prescribe specific subjects for pre-law study, but a liberal arts course is highly recommended. Theology and philosophy, history, the social sciences and languages, mathematics, the natural sciences, and the arts—all are valuable for the future lawyer in developing a sound philosophy of life, intellectual maturity and discipline, and a well-rounded background.

Law schools place great emphasis on the basic ability to use the English language well in reading, in speaking, and especially in writing. One or two courses in accounting should be included in a pre-law program.

Students interested in a career in law should consult a member of the Xavier University Pre-Legal Committee. They are also urged to join the St. Thomas More Pre-Law Society.

THE BACHELOR OF LITERATURE

(For Humanistic Studies at Milford College)

The degree of Bachelor of Literature is conferred on candidates from Milford College whose major and minor have been in the curricular field of classical languages and English, and whose program has included the following subjects and corresponding semester hours:

<i>Subject</i>		<i>Sem. Hrs.</i>		<i>Subject</i>		<i>Sem. Hrs.</i>	
		<i>L.D.</i>	<i>U.D.</i>			<i>L.D.</i>	<i>U.D.</i>
Latin.....	10	20		Modern Language..	6-12	—	
Greek.....	6	12		Math. or Science....	6	—	
English.....	9-12	12-15		Speech.....	4	—	
Education.....	3	3		Theology.....	8	—	
History.....	6	—		Electives.....	—	11-23	

BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION

(Offered in General Business in the Evening College only)

This B.S.B.A. program for Evening College students requires the following non-business subjects:

<i>Subject</i>	<i>Sem. Hrs.</i>	<i>Subject</i>	<i>Sem. Hrs.</i>
English.....	12	Philosophy.....	18
History.....	6	Psychology.....	3
Mathematics.....	6	Speech.....	2
Science.....	8	Theology.....	8
		Christian Culture.....	2-4

Non-Catholics will substitute appropriate courses approved by the Dean for the Theology requirement.

The remainder of the curriculum is as follows:

Business Core:

<i>Course No.</i>	<i>Subject</i>	<i>Sem. Hrs.</i>
Ac 51-52	Principles of Accounting I-II.....	6
BA 190	Business Statistics.....	3
BA 193-194	Business Law I-II.....	6
Ec 33-34	Principles of Economics I-II.....	6
Ec 130	Labor Economics.....	3
Ec 140	Economic History of the United States.....	3
Ec 150	Money and Banking.....	3
Ec 160	Business (Corporation Finance).....	3
Mg 90	Principles of Management.....	3
Mk 70	Principles of Marketing.....	3

Concentration:

Ac 166	Financial Statements.....	3
Ec 132	Economic Theory and Social Order.....	3
Electives	At least one course from each of these fields:	
	Economics, Finance, Industrial-Relations/ Management, and Marketing.....	15

Degree Programs— The College of Business Administration

THE BACHELOR OF SCIENCE IN BUSINESS

ADMINISTRATION (Accounting)

The program in accounting is designed to provide intensive training of a comprehensive nature for the adequate preparation of public, private or industrial accountants; auditors; credit analysts and general business executives. The advanced courses which elaborate on the theory and practice of accounts, business analysis, costs, auditing and specialized accounting culminate in preparation for C.P.A. examinations and for actual entrance into the field of public accountancy.

Students majoring in accounting must complete these specified courses:

Course No.	Subject	Sem. Hrs.
Ac 51, 52	Principles of Accounting.....	6
Ac 151, 152	Intermediate Accounting.....	6
Ac 153	Advanced Accounting Problems.....	3
Ac 155, 156	Industrial Accounting.....	6
Ac	Electives.....	6
BA 190	Business Statistics.....	3
BA 193, 194	Business Law.....	6
BA 196	Business Administration Problems.....	3
Ec 33, 34	Principles of Economics.....	6
Ec 140	Economic History of the United States.....	3
Fi 150	Money and Banking.....	3
IR 130	Labor Economics.....	3
Mg 90	Principles of Management.....	3
Mk 70	Principles of Marketing.....	3
Total.....		60

The required curriculum for the degree follows:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Accounting.....	6	21	Marketing.....	3	—
Business Administration.....	—	12	Mathematics.....	6	—
Christian Culture.....	—	8	Military Science.....	6	—
Economics.....	6	3	Philosophy.....	3	15
English.....	12	—	Psychology.....	3	—
Finance.....	—	3	Science.....	8	—
History.....	6	—	Speech.....	2	—
Management and Indus. Rel.....	3	3	Theology.....	8	—

B.S.B.A. (Accounting)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ac 51 Prin. of Accounting... 3		Ac 52 Prin. of Accounting... 3	
Ec 33 Prin. of Economics... 3		Ec 34 Prin. of Economics... 3	
Hs 7 Europe to 1648... 3		Hs 8 Europe since 1648... 3	
Mt 21 Math. of Economics... 3		Mt 22 Math. of Finance... 3	
En 3 English Comp... 3		En 4 English Comp... 3	
Th 40 Christ in the Gospels... 2		Th 41 Christ, Our Redeemer... 2	
MS 1 First Year Basic... 1		MS 2 First Year Basic... 1	
Total.....	18	Total.....	18

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Mk 70 Prin. of Marketing... 3		Mg 90 Prin. of Management... 3	
Ac 151 Interm. Accounting... 3		Ac 152 Interm. Accounting... 3	
En 31 Studies in Poetry*... 3		En 32 Studies in Drama*... 3	
Ps 31 General Psychology... 3		Pl 34 Logic... 3	
Th 42 Christ in His Church... 2		Th 43 Christ in the Soul... 2	
MS 31 Second Year Basic... 2		MS 32 Second Year Basic... 2	
		CA 1 Prin. of Speech... 2	
Total.....	16	Total.....	18

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ac 155 Indus. Accounting... 3		Ac 156 Indus. Accounting... 3	
BA 193 Business Law I... 3		BA 194 Business Law II... 3	
Ac Elective... 3		Ec 150 Money and Banking... 3	
		Science... 4	
Pl 111 Phil. Psychology... 3		Pl 100 Metaphysics... 3	
So 125 Marriage... 2			
Total.....	18	Total.....	16

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ac 153 Adv. Probs... 3		BA 190 Business Statistics... 3	
Ac Elective... 3		BA 196 Bus. Admin. Probs... 3	
IR 130 Labor Economics... 3		Ec 140 Econ. History, U. S... 3	
Pl 131 Prin. of Ethics... 3		Pl 132 Pers., Social Ethics... 3	
Christian Culture (Ec 132 Recommended)... 3		Pl 105, 106, 107, or 133... 3	
Total.....	15	Total.....	15

*Students (except those who have completed En 14) may substitute En 34: Studies in the Novel for either En 31 or 32.

THE BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION (Economics)

This Bachelor of Science in Business Administration provides the student with basic principles and procedures fundamental to the intellectual analysis of economic problems of the individual firm, industry, and the economy as a whole. Such training prepares the student to recognize the problem, to analyze it objectively, and to offer a proper solution. The program is beneficial to those who wish to assume positions as economists, either private or public; business analysts; investment analysts; business executives; and labor leaders. It encourages them not only to solve individual problems, but to analyze the monetary and fiscal policy of the government in relation to its effects on the total economy.

Students working for the B.S.B.A. (Economics) must complete these specified courses:

<i>Course No.</i>	<i>Subject</i>	<i>Sem. Hrs.</i>
Ec 33, 34	Principles of Economics.....	6
Ec 130	Labor Economics.....	3
Ec 132	Economic Theory and Social Order.....	3
Ec 133	Microeconomic Analysis.....	3
Ec 134	Macroeconomic Analysis.....	3
Ec 139	History of Economic Thought.....	3
Ec 140	Economic History of U. S.....	3
Ec	Electives.....	6
Ac 51, 52	Principles of Accounting.....	6
Mk 70	Principles of Marketing.....	3
Mg 90	Principles of Management.....	3
Fi 150	Money and Banking.....	3
Fi 160	Business Finance.....	3
BA 190	Business Statistics.....	3
BA 193, 194	Business Law.....	6
BA 196	Business Administration Problems.....	3
Total.....		60

Prescribed subjects and credit hours required for the B.S.B.A. (Economics) follow:

<i>Subject</i>	<i>Sem. Hrs.</i> <i>L.D. U.D.</i>	<i>Subject</i>	<i>Sem. Hrs.</i> <i>L.D. U.D.</i>
Accounting.....	6 —	Marketing.....	3 —
Business Administration.....	— 12	Mathematics.....	6 —
Christian Culture.....	— 8	Military Science.....	6 —
Economics.....	6 24	Philosophy.....	3 15
English.....	12 —	Psychology.....	3 —
Finance.....	— 6	Science.....	8 —
History.....	6 —	Speech.....	2 —
Management and I.R.....	3 —	Theology.....	8 —

B.S.B.A (Economics)

Freshman Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Ac 51 Prin. of Accounting...	3	Ac 52 Prin. of Accounting...	3
Ec 33 Prin. of Economics...	3	Ec 34 Prin. of Economics...	3
Hs 7 Europe to 1648.....	3	Hs 8 Europe since 1648....	3
Mt 21 Math. of Economics...	3	Mt 22 Math. of Finance....	3
En 3 English Comp.....	3	En 4 English Comp.....	3
Th 40 Christ in the Gospels..	2	Th 41 Christ, Our Redeemer..	2
MS 1 First Year Basic.....	1	MS 2 First Year Basic.....	1
Total.....		18	

Sophomore Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Mk 70 Prin. of Marketing....	3	Mg 90 Prin. of Management..	3
Ec 130 Labor Economics.....	3	Fi 160 Business Finance....	3
En 31 Studies in Poetry*....	3	En 32 Studies in Drama*....	3
Ps 31 Gen. Psychology.....	3	Pl 34 Logic.....	3
Th 42 Christ in His Church..	2	Th 43 Christ in the Soul....	2
MS 31 Second Year Basic....	2	MS 32 Second Year Basic....	2
		CA 1 Prin. of Speech.....	2
Total.....		16	
		Total.....	
		18	

Junior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Ec 140 Econ. Hist. of U. S....	3	Ec 150 Money and Banking..	3
BA 193 Business Law I.....	3	BA 194 Business Law II....	3
		Ec Elective.....	3
		Science.....	4
Pl 111 Phil. Psychology.....	3	Pl 100 Metaphysics.....	3
So 125 Marriage.....	2		
Total.....		18	
		Total.....	
		16	

Senior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Ec Elective.....	3	BA 196 Bus. Admin. Probs....	3
BA 190 Business Statistics...	3	Ec 134 Macroecon. Analysis..	3
Ec 132 Econ. Theory and Social Order.....	3	Ec 139 Hist. Econ. Thought..	3
Ec 133 Microecon. Analysis..	3	Pl 132 Per., Social Ethics....	3
Pl 131 Prin. of Ethics.....	3	Pl 105, 106, 107, or 133....	3
Total.....		15	

*Students (except those who have completed En 14) may substitute En 34: Studies in the Novel for either En 31 or 32.

THE BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION (Finance)

The Bachelor of Science in Business Administration program in finance develops an appreciation in the student of financial management and financial operation. Every one majoring in finance must take three basic courses designed to acquaint him with the various financial records of the firm, the character and appraisal of corporate securities, and the financial techniques applicable to the various phases of this discipline. In addition, the student may choose elective subjects. This permits him to aim at a particular segment of finance such as corporate finance, security sales, etc. Certain courses are offered each semester. Others are cycled every other semester or every other year to provide the greatest diversification possible. Majors in finance will be offered opportunities to inspect various financial institutions and to meet with professionals in the field.

Students working for the B.S.B.A. (Finance) must complete these specified courses:

Course No.	Subject	Sem. Hrs.
Fi 150	Money and Banking	3
Fi 155	Investments	3
Fi 160	Business Finance	3
Fi 168	Seminar in Finance	3
Fi 195	Cases and Problems in Finance	3
	Electives	9
Ac 51, 52	Principles of Accounting	6
Ec 33, 34	Principles of Economics	6
Ec 140	Economic History of U. S.	3
Mk 70	Principles of Marketing	3
Mg 90	Principles of Management	3
IR 130	Labor Economics	3
BA 190	Business Statistics	3
BA 193, 194	Business Law	6
BA 196	Business Administration Problems	3
Total		60

Prescribed subjects and credit hours required for the B.S.B.A. (Finance) follow:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Accounting	6	—	Management and I.R.	3	3
Business Administration	—	12	Marketing	3	—
Christian Culture	—	8	Mathematics	6	—
Economics	6	3	Military Science	6	—
English	12	—	Philosophy	3	15
Finance	—	24	Psychology	3	—
History	6	—	Science	8	—
			Speech	2	—
			Theology	8	—

B.S.B.A. (Finance)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ac 51 Prin. of Accounting	3	Ac 52 Prin. of Accounting	3
Ec 33 Prin. of Economics	3	Ec 34 Prin. of Economics	3
Hs 7 Europe to 1648	3	Hs 8 Europe since 1648	3
Mt 21 Math. of Economics	3	Mt 22 Math. of Finance	3
En 3 English Comp.	3	En 4 English Comp.	3
Th 40 Christ in the Gospels	2	Th 41 Christ, Our Redeemer	2
MS 1 First Year Basic	1	MS 2 First Year Basic	1
Total	18	Total	18

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Mk 70 Prin. of Marketing	3	Mg 90 Prin. of Management	3
Fi 160 Bus. Finance	3	Ec 130 Labor Economics	3
En 31 Studies in Poetry*	3	En 32 Studies in Drama*	3
Ps 31 Gen. Psychology	3	Pl 34 Logic	3
Th 42 Christ in His Church	2	Th 43 Christ in the Soul	2
MS 31 Second Year Basic	2	MS 32 Second Year Basic	2
		CA 1 Prin. of Speech	2
Total	16	Total	18

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Fi 150 Money and Banking	3	Elective	3
Fi 155 Investments	3	BA 190 Bus. Statistics	3
Ba 193 Business Law I	3	BA 194 Bus. Law II	3
		Science	4
Pl 111 Phil. Psychology	3		4
So 125 Marriage	2	Pl 100 Metaphysics	3
Total	18	Total	16

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ec 140 Econ. History, U. S.	3	BA 196 Bus. Admin. Probs.	3
Fi 195 Cases, Probs. in Finance	3	Fi 168 Seminar in Finance	3
Elective	3	Elective	3
Pl 131 Prin. of Ethics	3	Pl 132 Pers., Social Ethics	3
Christian Culture (Ec 132 Recommended)	3	Pl 105, 106, 107, or 133	3
Total	15	Total	15

*Students (except those who have completed En 14) may substitute En 34: Studies in the Novel for either En 31 or 32.

THE BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION (Industrial Relations)

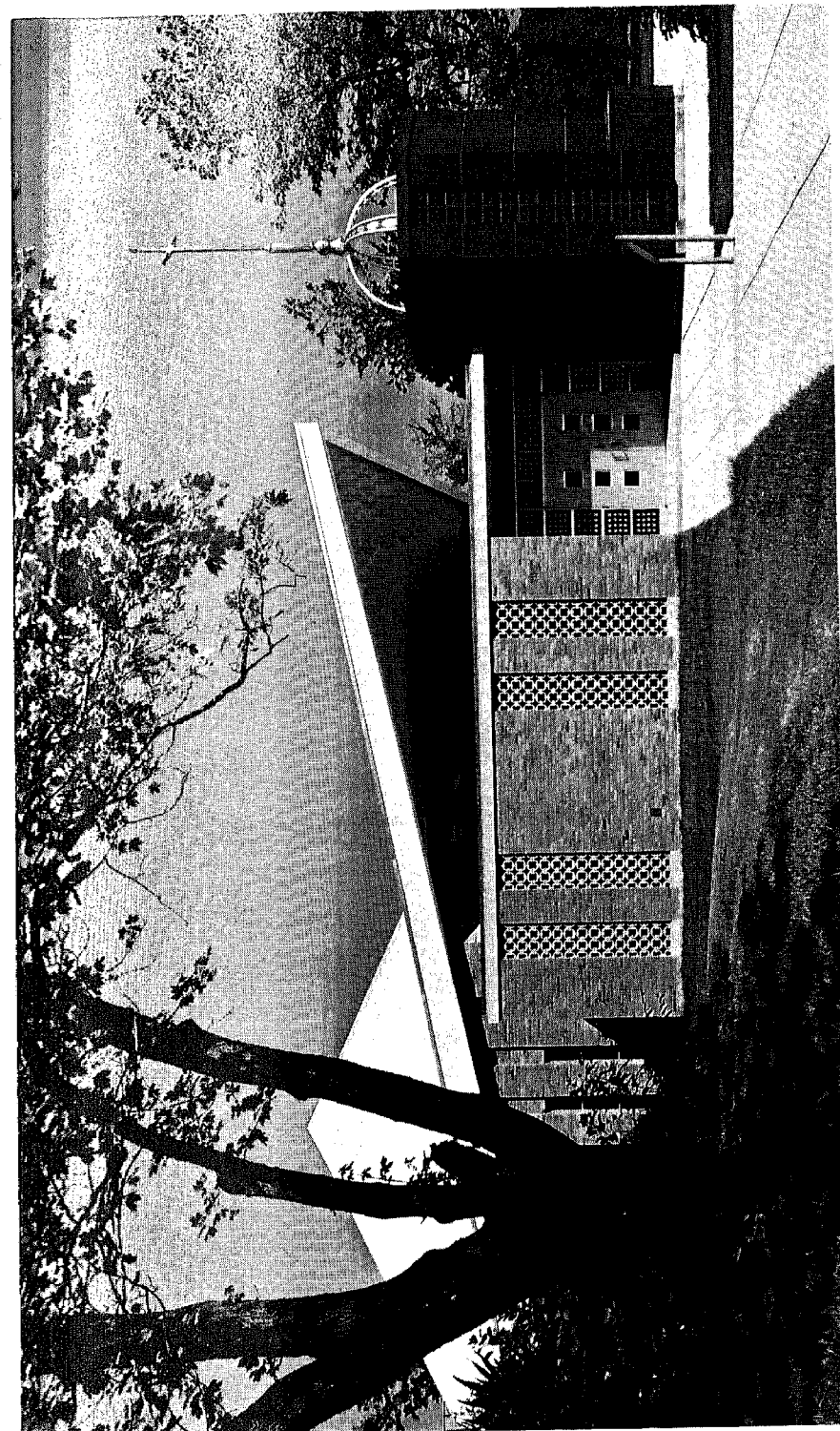
In an industrial society which is becoming increasingly more complex and interdependent, the need for leaders in the area of industrial relations with a well-rounded professional training is a necessity. This program is designed to provide specific knowledge of labor and is supported by strong cultural background in the liberal arts. Concentration in industrial relations will acquaint the student with the economic, social, political, and psychological aspects of labor problems and relations. It, also, prepares him for further academic study and for positions in government, industry, or the labor movement.

Students working for the B.S.B.A. (Industrial Relations) must complete these specified courses:

<i>Course No.</i>	<i>Subject</i>	<i>Sem. Hrs.</i>
Mg 90	Principles of Management.....	3
IR 115	Personnel Administration.....	3
IR 116	Labor Relations.....	3
IR 128	Industrial Psychology.....	3
IR 130	Labor Economics.....	3
IR	Electives.....	9
Ac 51, 52	Principles of Accounting.....	6
Mk 70	Principles of Marketing.....	3
Ec 33, 34	Principles of Economics.....	6
Ec 140	Economic History of U. S.....	3
Fi 150	Money and Banking.....	3
Fi 160	Business Finance.....	3
BA 190	Business Statistics.....	3
BA 193, 194	Business Law.....	6
BA 196	Business Administration Problems.....	3
Total.....		60

Prescribed subjects and credit hours required for the B.S.B.A. (Industrial Relations) follow:

<i>Subject</i>	<i>Sem. Hrs.</i>		<i>Subject</i>	<i>Sem. Hrs.</i>	
	<i>L.D.</i>	<i>U.D.</i>		<i>L.D.</i>	<i>U.D.</i>
Accounting.....	6	—	Marketing.....	3	—
Business Admin.....	—	12	Mathematics.....	6	—
Christian Culture.....	—	8	Military Science.....	6	—
Economics.....	6	3	Philosophy.....	3	15
English.....	12	—	Psychology.....	3	—
Finance.....	—	6	Science.....	8	—
History.....	6	—	Speech.....	2	—
Management and			Theology.....	8	—
I.R.....	3	21			



THE WILLIAMS MEMORIAL—ST. ROBERT BELLARMINE CHAPEL

B.S.B.A. (Industrial Relations)

Freshman Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Ac 51 Prin. of Accounting...	3	Ac 52 Prin. of Accounting...	3
Ec 33 Prin. of Econ.....	3	Ec 34 Prin. of Economics...	3
Hs 7 Europe to 1648.....	3	Hs 8 Europe since 1648....	3
Mt 21 Math. of Economics...	3	Mt 22 Math. of Finance....	3
En 3 English Comp.....	3	En 4 English Comp.....	3
Th 40 Christ in the Gospels..	2	Th 41 Christ, Our Redeemer..	2
MS 1 First Year Basic.....	1	MS 2 First Year Basic.....	1
<hr/>		<hr/>	
Total.....		Total.....	
		18	

Sophomore Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Mg 90 Prin. of Management.	3	Mk 70 Prin. of Marketing...	3
Ec 130 Labor Economics.....	3	Fi 160 Business Finance....	3
En 31 Studies in Poetry*....	3	En 32 Studies in Drama*....	3
Ps 31 Gen. Psychology.....	3	Pl 34 Logic.....	3
Th 42 Christ in His Church..	2	Th 43 Christ in the Soul....	2
MS 31 Second Year Basic....	2	MS 32 Second Year Basic....	2
		CA 1 Prin. of Speech.....	2
<hr/>		<hr/>	
Total.....		Total.....	
		16	
		18	

Junior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
IR 115 Personnel Admin....	3	IR 116 Labor Relations.....	3
BA 193 Business Law I.....	3	BA 194 Business Law II.....	3
IR Elective.....	3	BA 190 Business Statistics...	3
IR Science.....	4	Science.....	4
Pl 111 Phil. Psychology.....	3	Pl 100 Metaphysics.....	3
So 125 Marriage.....	2		
<hr/>		<hr/>	
Total.....		Total.....	
		18	
		16	

Senior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
IR 128 Indus. Psychology....	3	BA 196 Bus. Admin. Probs....	3
Ec 140 Econ. History, U. S....	3	Ec 150 Money and Banking..	3
IR Elective.....	3	IR Elective.....	3
Pl 131 Prin. of Ethics.....	3	Pl 132 Pers., Social Ethics...	3
Christian Culture		Pl 105, 106, 107, or 133....	3
(Ec 132 Recommended)....	3		
<hr/>		<hr/>	
Total.....		Total.....	
		15	
		15	

*Students (except those who have completed En 14) may substitute En 34: Studies in the Novel for either En 31 or 32.

THE BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION (Management)

Contributions of the business world to society are largely dependent on good management.

The objectives of this program are to facilitate such contributions by:

1. Providing specialized professional training in the principles and the practices for the effective operation of the business organization.
2. Stimulating the application of sound philosophical principles to the wide range of problems encountered by management.
3. Aiding in the development of the student's intellect and personality to prepare him for leadership in society.

Students working for the B.S.B.A. (Management) must complete these specified courses:

Course No.	Subject	Sem. Hrs.
Mg 90	Principles of Management.....	3
Mg 115	Personnel Administration.....	3
Mg 116	Labor Relations.....	3
Mg	Electives.....	12
Ac 51, 52	Principles of Accounting.....	6
Ec 33, 34	Principles of Economics.....	6
Mk 70	Principles of Marketing.....	3
IR 130	Labor Economics.....	3
Ec 140	Economic History of U. S.....	3
Fi 150	Money and Banking.....	3
Fi 160	Business Finance.....	3
BA 190	Business Statistics.....	3
BA 193, 194	Business Law.....	6
BA 196	Business Administration Problems.....	3
Total.....		60

Prescribed subjects and credit hours required for the B.S.B.A. (Management) follow:

Subject	Sem. Hrs. L.D. U.D.	Subject	Sem. Hrs. L.D. U.D.
Accounting.....	6 —	Marketing.....	3 —
Business Admin.....	— 12	Mathematics.....	6 —
Christian Culture.....	— 8	Military Science.....	6 —
Economics.....	6 3	Philosophy.....	3 15
English.....	12 —	Psychology.....	3 —
Finance.....	— 6	Science.....	8 —
History.....	6 —	Speech.....	2 —
Management and I.R.....	3 21	Theology.....	8 —

B.S.B.A. (Management)

Freshman Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
Ac 51	Prin. of Accounting...	3	Ac 52	Prin. of Accounting...	3
Ec 33	Prin. of Economics...	3	Ec 34	Prin. of Economics...	3
Hs 7	Europe to 1648.....	3	Hs 8	Europe since 1648....	3
Mt 21	Math. of Economics...	3	Mt 22	Math. of Finance....	3
En 3	English Comp.....	3	En 4	English Comp.....	3
Th 40	Christ in the Gospels..	2	Th 41	Christ, Our Redeemer..	2
MS 1	First Year Basic.....	1	MS 2	First Year Basic.....	1
Total.....		18	Total.....		18

Sophomore Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
Mg 90	Prin. of Management	3	Mk 70	Prin. of Marketing	3
Ec 130	Labor Economics	3	Fi 160	Business Finance	3
En 31	Studies in Poetry*	3	En 32	Studies in Drama*	3
Ps 31	Gen. Psychology	3	Pl 34	Logic	3
Th 42	Christ in His Church	2	Th 43	Christ in the Soul	2
MS 31	Second Year Basic	2	MS 32	Second Year Basic	2
			CA 1	Prin. of Speech	2
Total		16	Total		18

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Mg 115 Personnel Admin.	3	Mg 116 Labor Relations.	3
BA 193 Business Law I.	3	BA 194 Business Law II.	3
BA 190 Business Statistics.	3	Mg Elective.	3
Science	4	Science.	4
Pl 111 Phil. Psychology.	3	Pl 100 Metaphysics.	3
So 125 Marriage.	2		
Total.	18	Total.	16

Senior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Mg Electives	6	BA 196 Bus. Admin. Probs.	3
Ec 150 Money and Banking	3	Mg Elective	3
Pl 131 Prin. of Ethics	3	Ec 140 Econ. History, U. S.	3
Christian Culture (Ec 132 Recommended)	3	Pl 132 Pers., Social Ethics	3
		Pl 105, 106, 107, or 133	3
Total	15	Total	15

*Students (except those who have completed En 14) may substitute En 34: Studies in the Novel for either En 31 or 32.

THE BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION (Marketing)

The Bachelor of Science in Business Administration program with a concentration in marketing studies the institutions and functions of the modern distribution system. The program orients the student towards the total marketing concept so that, trained in the analytical processes, he is qualified for management responsibility in the marketing area. Furthermore, a student will find the study of marketing complementary to his choice of a career in the field.

Students working for the B.S.B.A. (Marketing) must complete these specified courses:

Course No.	Subject	Sem. Hrs.
Mk 70	Principles of Marketing.....	3
Mk 171	Marketing Policy.....	3
Mk 172	Marketing Research.....	3
Mk 175	Marketing Management.....	3
Mk	Electives.....	9
Ac 51, 52	Principles of Accounting.....	6
Ec 33, 34	Principles of Economics.....	6
Ec 140	Economic History of U. S.....	3
Mg 90	Principles of Management.....	3
IR 130	Labor Economics.....	3
Fi 150	Money and Banking.....	3
Fi 160	Business Finance.....	3
BA 190	Business Statistics.....	3
BA 193, 194	Business Law.....	6
BA 196	Business Administration Problems.....	3
Total.....		60

Prescribed subjects and credit hours required for the B.S.B.A. (Marketing) follow:

Sem. Hrs.		Subject	Sem. Hrs.	
L.D.	U.D.		L.D.	U.D.
Accounting.....	6	—	Marketing.....	3
Business Administration....	—	12	Mathematics.....	6
Christian Culture....	—	8	Military Science.....	6
Economics.....	6	3	Philosophy.....	3
English.....	12	—	Psychology.....	3
Finance.....	—	6	Science.....	8
History.....	6	—	Speech.....	2
Management and I.R.....	3	3	Theology.....	8

B.S.B.A. (Marketing)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ac 51 Prin. of Accounting... 3		Ac 52 Prin. of Accounting... 3	
Ec 33 Prin. of Economics... 3		Ec 34 Prin. of Economics... 3	
Hs 7 Europe to 1648... 3		Hs 8 Europe since 1648... 3	
Mt 21 Math. of Economics... 3		Mt 22 Math. of Finance... 3	
En 3 English Comp... 3		En 4 English Comp... 3	
Th 40 Christ in the Gospels.. 2		Th 41 Christ, Our Redeemer.. 2	
MS 1 First Year Basic..... 1		MS 2 First Year Basic..... 1	
Total.....	18	Total.....	18

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Mg 90 Prin. of Management. 3		Mk 70 Prin. of Marketing.... 3	
Fi 160 Business Finance.... 3		Ec 130 Labor Economics..... 3	
En 31 Studies in Poetry*... 3		En 32 Studies in Drama*... 3	
Ps 31 Gen. Psychology..... 3		Pl 34 Logic..... 3	
Th 42 Christ in His Church.. 2		Th 43 Christ in the Soul.... 2	
MS 31 Second Year Basic.... 2		MS 32 Second Year Basic.... 2	
		CA 1 Prin. of Speech..... 2	
Total.....	16	Total.....	18

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Mk 171 Marketing Policy.... 3		Mk 172 Marketing Research.. 3	
BA 193 Business Law I..... 3		BA 194 Business Law II.... 3	
BA 190 Business Statistics... 3		Mk Elective..... 3	
Science..... 4		Science..... 4	
Pl 111 Phil. Psychology.... 3		Pl 100 Metaphysics..... 3	
So 125 Marriage..... 2			
Total.....	18	Total.....	16

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ec 150 Money and Banking.. 3		BA 196 Bus. Admin. Probs... 3	
Mk Elective..... 6		Mk 175 Marketing Mgt..... 3	
Pl 131 Prin. of Ethics..... 3		Ec 140 Econ. History, U. S... 3	
Christian Culture (Ec 132 Recommended).... 3		Pl 132 Pers., Social Ethics... 3	
		Pl 105, 106, 107, or 133.... 3	
Total.....	15	Total.....	15

*Students (except those who have completed En 14) may substitute En 34: Studies in the Novel for either En 31 or 32.

Departments of Instruction

The courses of instruction are numbered in accord with a unified plan. *Lower division* courses are numbered 1 to 99. Within the *lower division* the numbers 30 to 99 generally indicate that the course is open to sophomores. *Upper division* courses are numbered from 100 to 199. Graduate courses are numbered from 200 to 299. Double numbers indicate that the first semester course is prerequisite to the second semester course *and that both must be satisfactorily completed to obtain credit for either course*. Any exceptions will be stated in course descriptions. In most departments the courses are grouped in decades according to sequence, content, or some other plan of sub-division.



Key Symbols

The following key letters are used to indicate the different departments of instruction:

Accounting.....Ac	Industrial Relations.....IR
Biology.....Bl	Latin.....Lt
Business Administration....BA	Management.....Mg
Chemistry.....Ch	Marketing.....Mk
Christian Culture.....CC	Mathematics.....Mt
Communication Arts.....CA	Military Science.....MS
Economics.....Ec	Modern Language.....ML
Education.....Ed	Philosophy.....Pl
English.....En	Physics.....Ph
Finance.....Fi	Political Science.....Po
French.....Fr	Psychology.....Ps
Geography.....Gg	Russian.....Ru
German.....Gr	Sociology.....So
Greek.....Gk	Spanish.....Sp
History.....Hs	Theology.....Th

Departments—

The College of Arts and Sciences

Biology (Bl)

Staff: FR. PETERS, *chairman*; DR. CUSICK, DR. HIGGINS, MR. LAYCOCK, DR. TAFURI.

Laboratory Teaching Assistants: MRS. CUSICK, MR. MUNCH, MR. WEIMER.

Bl 1 and 2 cannot be taken for pre-medical or pre-dental requirements.

Bl 3 and 4 are required as an introduction to all *upper division* courses. In exceptional cases, Bl 1 and 2 may be considered as partial requisite fulfillment.

A major consists of 8 credit hours of *lower division* work and 28 credit hours of *upper division* work inclusive of a senior thesis, Bl 199.

A minor consists of 8 credit hours of *lower division* work and 14 credit hours of *upper division* work.

UNDERGRADUATE DIVISION

Lower Division Courses

1. GENERAL BIOLOGY I. Four credit hours. A study of fundamental principles of biological science emphasizing the morphology and physiology of organs and systems in a typical vertebrate with special reference to the biology of man. Three lectures and two hours of laboratory.
2. GENERAL BIOLOGY II. A survey of the morphology, physiology, life history and economic importance of representative plants and invertebrate animals together with discussions of heredity, embryology and evolution. Three lectures and two hours of laboratory.
3. GENERAL ZOOLOGY I. Four credit hours. An introduction to the basic principles of biology with emphasis on the chordates and the anatomy and physiology of several representative vertebrates. Two lectures and four hours of laboratory.
4. GENERAL ZOOLOGY II. Four credit hours. A continuation of Bl 3 and a systematic survey of the morphology, physiology, classification, life history, development and interrelationship of the representative animals of the invertebrate phyla inclusive of heredity, evolution, ecology, conservation and related topics. Two lectures and four hours of laboratory.

Biology

9. HUMAN ANATOMY AND PHYSIOLOGY. Three credit hours. A study of the organs and systems of man with emphasis on myology and the physiology of exercise. This course is for students majoring in physical education. Two lectures and two hours of laboratory.
10. HUMAN ANATOMY AND PHYSIOLOGY. Three credit hours. A continuation of Bl 9. Two lectures and two hours of laboratory. Prerequisite: Bl 9.

Upper Division Courses

101. COMPARATIVE ANATOMY OF THE VERTEBRATES. Four credit hours. A study of the comparative morphology of the organs and systems of chordates. Two lectures and four hours of laboratory. Special materials fee: \$12. Prerequisite: Bl 3, 4.
105. GENERAL BOTANY. Four credit hours. A study of the morphology, physiology, classification and life cycles of representatives of the major divisions of the plant kingdom. Seed plants are stressed. Two lectures and four hours of laboratory.
106. MICROBIOLOGY. Four credit hours. A study of the physiology and morphology of the algae, bacteria, and fungi. Isolation and culture methods and the beneficial and detrimental effects of these organisms will be included. Prerequisite: Bl 105.
112. GENERAL AND VERTEBRATE EMBRYOLOGY. Four credit hours. A study of the development of vertebrates, including gametogenesis, fertilization, and early embryology. Organogenesis of the chick and pig is emphasized in the laboratory. Two lectures and four hours of laboratory. Prerequisite: Bl 3, 4.
121. THE BIOLOGICAL BASIS OF ANIMAL BEHAVIOR. Four credit hours. A comparative study of the physiology and morphology of the nervous system and sensory receptors, with special emphasis on the adaptation of animal life to environmental changes. Two lectures and four hours of laboratory. Prerequisites: Bl 1 and 2, or Bl 3 and 4. (Ps 121)
141. COMPARATIVE VERTEBRATE HISTOLOGY. Four credit hours. A comparative study of the microscopic structure and function of organs and systems among vertebrates. Two lectures and four hours of laboratory.
143. GENERAL ENTOMOLOGY. Four credit hours. Two lectures and four hours of laboratory.

Biology

144. INVERTEBRATE ZOOLOGY. Four credit hours. Two lectures and four hours of laboratory.
152. GENETICS. Two or three credit hours. A study of the principles of heredity and the operation of hereditary factors in the development of individual traits. Two lectures and two hours of laboratory.
160. BIOCHEMISTRY LECTURE. Three credit hours. Biochemistry of carbohydrates, lipids and proteins discussed at length. Certain special topics inclusive of vitamins, hormones, enzymes and medicinal chemistry considered. Three lectures per week.
161. GENERAL PHYSIOLOGY. Four credit hours. A study of the fundamental behavior of living cells and tissues and an introduction to the physiology of mammalian systems. Two lectures and four hours of laboratory. Prerequisite: Bl 101.
180. HISTORY OF BIOLOGY. Two credit hours. A study of the historical development of the biological sciences. Two lectures: no laboratory.
188. ECOLOGICAL PRINCIPLES. Four credit hours. Two lectures and four hours of laboratory.
- 192a. SPECIAL PROBLEMS IN BIOLOGY. One to four credit hours. This course is designed to give the student an opportunity to engage in independent study of some specialized field of biology.
A charge will be made for materials used in the laboratory.
- 192b. SPECIAL PROBLEMS IN BIOLOGY. One to four credit hours. A continuation of Bl 192a.
194. THEORY OF EVOLUTION. Two credit hours. A study of organic evolution. Two lectures: no laboratory. Prerequisite: Bl 1, 2 or 3, 4.
- 199a. METHODS OF BIOLOGICAL RESEARCH. One credit hour. Undergraduate research in one of the fields of biology selected by the student. Prerequisite: Senior standing, consent of the instructor directing the course, and approval of the Chairman of the Department. A charge will be made for materials used in the laboratory. The fee of \$25 is payable only once for Bl 199a and Bl 199b.
- 199b. METHODS OF BIOLOGICAL RESEARCH. One credit hour. A continuation and completion of Bl 199a.

Chemistry (Ch)

Staff: DR. JOHNSON, *chairman*; DR. DUBE, DR. GARASCIA, DR. KLINGENBERG, DR. O'NEILL, DR. SMART, FR. THEPE.

Assisted by: DR. BRENNAN, DR. CARR, MR. HAUSER, DR. MESSINEO, DR. WEBB.

Graduate Assistants: MR. ENGEL, MR. FUCHS, MR. GANDHI, MR. GRANT, MR. HOGAN, MRS. KNECHT, MR. KULICH, MR. MADER, MR. MILLER, MR. SCHEVE, MR. SHEEHAN, MR. SULLIVAN.

UNDERGRADUATE DIVISION

Lower Division Courses

1. FOUNDATIONS OF CHEMISTRY. Four credit hours. A terminal course for non-science majors which introduces the student to the structure of matter. The subjects covered include mechanics, kinetic molecular theory, electricity and magnetism, atomic and molecular structure, and nuclear processes. Three lectures and two hours of laboratory per week.
2. FOUNDATIONS OF CHEMISTRY. Four credit hours. A terminal course for non-science majors which stresses the chemical aspects of materials in use today.
3. GENERAL CHEMISTRY. Four or five credit hours. Lectures and demonstrations combined with discussions of problems and laboratory work. An examination of the basic principles and descriptive facts of general chemistry. Included are treatment of atomic and molecular structure, states of matter, solutions, ionic equilibria, kinetics, and the chemistry of representative elements. Three lectures and three to six hours of laboratory per week. Prerequisite to all other courses in chemistry except Ch 1 and 2.
4. GENERAL CHEMISTRY. Four or five credit hours. A continuation of Ch 3. The laboratory work includes some qualitative inorganic analysis. Three lectures and three to six hours of laboratory per week.
- 3-4. GENERAL CHEMISTRY I. Three credit hours. Evening Division only.
GENERAL CHEMISTRY II. Three credit hours. Evening Division only.
GENERAL CHEMISTRY III. Three credit hours. Evening Division only.

51. QUANTITATIVE CHEMISTRY. Four credit hours. An introduction to the theory and practice of analytical chemistry. Three lectures and four hours of laboratory per week.

Upper Division Courses

101. ORGANIC CHEMISTRY. Four credit hours. An introductory course treating the structure, preparation, reactions, and properties of carbon compounds. Three lectures and four hours of laboratory work per week. Prerequisites: Ch 3 and 4.
102. ORGANIC CHEMISTRY. Four credit hours. A continuation of Ch 101 which is also prerequisite.
106. QUALITATIVE ORGANIC CHEMISTRY. Three credit hours. A systematic identification of pure organic compounds and simple mixtures. Two lectures and six hours of laboratory work per week. Prerequisite: Ch 102.
107. INTERMEDIATE ORGANIC CHEMISTRY. Two credit hours. An extension of fundamental organic chemistry to include topics not previously considered. Some emphasis on synthetic methods. Two lectures per week. Prerequisite: Ch 102.
116. INSTRUMENTAL ANALYSIS. Four credit hours. Two lectures and six hours of laboratory per week. Modern analytical chemistry with emphasis on instrumentation and measurement techniques. Prerequisites: Ch 51, 102, and 126.
121. ELEMENTARY PHYSICAL CHEMISTRY. Three or four credit hours. A course intended primarily for pre-medical students who have not had Mt 50. Three lectures. One four-hour laboratory period per week if elected for four credit hours. Prerequisite: Ch 51.
125. PHYSICAL CHEMISTRY. Three credit hours. Three lectures per week. Prerequisites: Ch 4, Mt 51.
126. PHYSICAL CHEMISTRY. Four credit hours. A continuation of Ch 125, which is prerequisite. Three lectures and four hours of laboratory work.
151. INORGANIC PREPARATIONS. One lecture or individual consultation, and three hours of laboratory work per credit hour. Laboratory preparation of various classes of compounds intended to develop technique and to illustrate the methods employed in the preparation of pure inorganic compounds. Prerequisite: Ch 51.

152. **ORGANIC PREPARATIONS.** One, two or three credit hours. Lecture or consultation and laboratory work dealing with the fundamental techniques and manipulations of organic synthesis. Both theory and practice of operations such as distillation, melting point determination, recrystallization, etc., are reviewed. One lecture or individual consultation, and three hours of laboratory work per credit hour. Prerequisites: Ch 51, 101, 102.
160. **BIOCHEMISTRY LECTURE.** Three credit hours. Biochemistry of carbohydrates, lipids and proteins discussed at length. Certain special topics inclusive of vitamins, hormones, enzymes and medicinal chemistry considered. Three lectures per week. Prerequisite: Ch 102.
161. **BIOCHEMISTRY LABORATORY.** One or two credit hours. Experiments designed to illustrate biochemical principles. Three hours of laboratory per week per credit hour.
170. **INORGANIC CHEMISTRY.** Three credit hours. A presentation of modern theories of bonding and structure, as applied to inorganic compounds, with associated descriptive chemistry. Prerequisite: Ch 125.
171. **INORGANIC CHEMISTRY LABORATORY.** One credit hour. Laboratory techniques and practice in synthetic inorganic chemistry. One laboratory period per week. Prerequisite: Ch 170.
180. **INTRODUCTION TO RADIOCHEMISTRY.** Two credit hours. Lecture and laboratory. Basic principles of radiochemistry and methodology of instrumental techniques in the field.
190. **CHEMICAL LITERATURE.** One credit hour. An introduction to the nature and use of the chemical literature. Prerequisite: junior standing.
192. **PROBLEMS IN CHEMISTRY.** Credit to be arranged. Conferences and direction in library and laboratory work. Problems may be selected from any area of chemistry. A charge will be made for materials used in the laboratory. Prerequisite: permission of the Chairman of the Department.
- 199a. **SENIOR THESIS.** One credit hour. A course of directed reading and undergraduate research required of all majors in their senior year. A charge will be made for materials and apparatus used in this work.
- 199b. **SENIOR THESIS.** One credit hour. A continuation and conclusion of research begun in 199a. No additional charge for materials will be made.

GRADUATE DIVISION

The minimum requirements for a Master of Science degree in chemistry include:

1. Completion of 24 semester hours of course work inclusive of Ch 200 (required for full-time students only), 209, 224, 228, 240, 242, 245, 256, 258, and 262.
2. Master's thesis, Ch 299, constituting six semester hours of research.

Graduate Courses

200. **CHEMISTRY SEMINAR.** No credit. Critical discussion of and progress reports on theses and special topics by graduate students and staff members. Required for at least two semesters of all full-time students majoring in chemistry. Prerequisite: graduate standing.
201. **ORGANIC CHEMISTRY FOR TEACHERS.** Six credit hours. Four lecture and two laboratory credits. A course covering the preparation, properties, and reactions of the more common types of organic compounds. Laboratory work will include synthesis and identification of compounds.
202. **THEORETICAL CHEMISTRY FOR TEACHERS.** Six credit hours. Four lecture and two laboratory credits. A course intended to present the basic principles of physical and quantitative chemistry. Laboratory work will consist of experiments in both physical and analytical chemistry.
203. **INORGANIC CHEMISTRY FOR TEACHERS.** Four credit hours. Lectures only. This course will normally accompany Ch 204. Modern structural inorganic chemistry as well as descriptive chemistry based on the periodic relationships will be covered.
204. **CHEMICAL RESEARCH FOR TEACHERS.** Two credit hours. Laboratory work, library work, and written and oral report. After instruction in the use of chemical literature, the student selects a research topic upon which he will begin work during the same summer. Upon completion of the project, he submits a written report. An oral examination will be given over this material to satisfy the final examination requirement for the concentration in chemistry.
209. **ORGANIC STEREOCHEMISTRY.** Two credit hours. Fundamental structural theory and symmetry operations applied to the three-dimensional static and dynamic aspects of organic compounds. Geometrical, optical, and conformational isomerism. The stereochemical factors in certain organic reactions. Stereochemistry of elements other than carbon.

Chemistry

212. **HETEROCYCLIC ORGANIC CHEMISTRY.** Two credit hours. A lecture course on the application of fundamental organic reactions as applied to the heterocyclic organic molecules. Two lectures per week. Prerequisite: Ch 102.
214. **ORGANOMETALLIC CHEMISTRY.** Two credit hours. A survey of organometallic compounds and their chemistry. Synthesis, isolation, bonding, structure, and reactions are covered. Chief emphasis is on compounds containing sigma carbon-metal bonds.
220. **ADVANCED ORGANIC PREPARATIONS.** One to three credit hours. Lectures and/or consultation, and three hours of laboratory work per week per credit hour. A laboratory course.
224. **REACTION MECHANISMS.** Three credit hours. A study of theories of reaction mechanisms and their applications to both organic and inorganic systems. Reaction mechanisms specific to certain types of compounds. Methods for determination of mechanisms. Prerequisite: Ch 240.
228. **STRUCTURAL INORGANIC CHEMISTRY.** Two credit hours. A systematic presentation of the principles which determine the structure of inorganic substances. Emphasis is placed on periodic properties and bonding theories with special attention given to coordination chemistry. Prerequisite: Ch 245.
240. **CHEMICAL KINETICS.** Two credit hours. Empirical and theoretical treatment of homogenous reactions. Subjects covered include collision and transition state theories, experimental methods and the differential and integrated rate expressions for a variety of mechanisms.
242. **THERMODYNAMICS.** Two credit hours. A course in classical and statistical thermodynamics and in the kinetic theory of gases.
245. **THE CHEMICAL BOND.** Two credit hours. An introduction to the quantum theory of valence emphasizing calculations on molecular structure.
248. **INTRODUCTION TO VIBRATIONAL SPECTROSCOPY.** Two credit hours. An introduction to the theory of vibrational molecular spectroscopy.
250. **RADIOCHEMISTRY.** Two credit hours. A study of the principles of radiochemistry, properties of nuclides, advanced instrumental techniques, and methodology of radiochemical applications. Prerequisite: Ch 180 or its equivalent.

Chemistry

251. **RADIOCHEMISTRY LABORATORY.** One or two credit hours. Laboratory and instrumental technique in radiochemistry. Prerequisite: Ch 180. Corequisite: Ch 250.
256. **CHEMICAL SEPARATIONS.** Two credit hours. A comprehensive study of methods of chemical separation and their application in chemical analysis. Emphasis to be placed on the theory, techniques, and applications of current importance.
258. **CHEMICAL MEASUREMENTS.** Two credit hours. The theory and practice of methods for measuring the properties of chemical systems for the collection of analytical data. Modern methods will be stressed, especially those based on the optical and electrical properties of systems.
262. **INSTRUMENTAL METHODS.** One or two credit hours. A lecture and laboratory course designed to prepare the student for graduate study and research. Laboratory work consists of practice in the use of available instruments.
274. **ADVANCED BIOCHEMISTRY.** Two credit hours. A review and extension of fundamental biochemistry. Two lectures per week supplemented by library assignments. Prerequisite: Ch 160 or its equivalent.
276. **MEDICINAL CHEMISTRY.** Two credit hours. The organic chemistry of medicinal products. Structure-activity relationships will be stressed.
280. **SPECIAL TOPICS.** Two credit hours. Selections from the four major fields of chemistry. Varied topics representative of important phases of chemistry not treated in regular course work. The nature of the course material will be indicated by descriptive course titles, e.g., POLYMER CHEMISTRY or ORGANOMETALLICS, but the same course number will be retained.
281. **SPECIAL STUDY.** One credit hour. A short-term lecture series on special topics, emphasizing continuing education for practicing scientists. May be taken as a lecture series without credit. Nature of the course material will be indicated by descriptive subtitles.
299. **MASTER'S THESIS.** Six credit hours. Laboratory and library research under the supervision of a departmental research adviser. Problems may be selected from the general fields of organic, inorganic, analytical, or physical chemistry. A final written thesis is required for those desiring the Master's degree in chemistry. A charge will be made for materials and apparatus used in this work.

Classical Languages

Staff: DR. HARKINS, chairman; FR. BURKE, FR. DUNNE,
FR. FELTEN, FR. HETHERINGTON, MR. HOWARD, DR.
MURRAY, FR. PENDERGAST.

UNDERGRADUATE DIVISION

Greek (Gk)

Lower Division Courses

1. 2. ELEMENTARY GREEK. Six credit hours. One or two semesters.
- 5, 6. INTRODUCTION TO GREEK LITERATURE. Four or six credit hours. Two semesters.
7. XENOPHON. Three or four credit hours.
8. ST. LUKE. Two credit hours.
11. HOMER. Three credit hours. Readings from *The Iliad*.
12. HERODOTUS: SELECTED READINGS. Three credit hours.
17. LYSIAS: SELECTED READINGS. Three or four credit hours.
18. HOMER. Three credit hours. Selected portions of *The Odyssey*.
21. PLATO. Three or four credit hours. *The Apology* and other selections.
23. GREEK PROSE COMPOSITION, I. Two or four credit hours.
24. GREEK PROSE COMPOSITION, II. Two or four credit hours.

Upper Division Courses

Open to Advanced Undergraduates and to Graduates

100. HISTORY OF ANCIENT GREECE. Three credit hours.
103. DEMOSTHENES: THE CROWN. Three or four credit hours.
104. CHRISTIAN ANTIQUITY. Three credit hours. (Hs 104)
105. CLASSICAL MYTHOLOGY. Three credit hours. (Lt 105, En 105)
107. XENOPHON: THE ANABASIS. Three credit hours. Given at Milford College.
108. DEMOSTHENES: PHILIPPICS AND OLYNTHIACS. Three credit hours.

112. HERODOTUS. Three credit hours.
113. GREEK STYLE, I. Two credit hours.
117. LYSIAS. Three credit hours.
123. GREEK STYLE, II. Two credit hours.
141. THUCYDIDES. Three or four credit hours.
151. HOMER: ILIAD, I-XII. Three credit hours. A study of the Greek epic.
152. HOMER: ILIAD, XIII-XXIV. Three credit hours.
153. HOMER: ODYSSEY. Three credit hours.
160. SOPHOCLES. Three or four credit hours. *The Oedipus Tyrannus* and *Antigone*.
162. EURIPIDES. Three credit hours.
163. AESCHYLUS. Three credit hours.
164. ARISTOPHANES. Three credit hours.
171. PLATO: THE REPUBLIC. Three or four credit hours.
172. PLATO: DIALOGUES. Three credit hours.
185. CLASSICAL ARCHAEOLOGY. Two or three credit hours.
188. HISTORY OF CLASSICAL LITERATURE. Three credit hours.
195. GREEK LITERATURE IN TRANSLATION. Three credit hours.
197. SPECIAL STUDY. Three credit hours. Greek poetry.
198. SPECIAL STUDY. Three credit hours. Greek prose.
199. SENIOR COMPREHENSIVE REVIEW. Two credit hours. Required of all seniors majoring in Greek.

GRADUATE DIVISION

202. GREECE, THE FIFTH CENTURY. Three credit hours.
203. GREECE TO 480. Three credit hours.
204. GREEK PALAEOGRAPHY. Three credit hours.
215. GREEK AND ROMAN ART. Three credit hours.
216. TOPOGRAPHY OF ANCIENT ATHENS. Three credit hours.

Classical Languages

- 241. THUCYDIDES. Three credit hours.
- 245. HERODOTUS. Three credit hours.
- 253. HOMER. Three credit hours.
- 261a. SOPHOCLES: EARLY PLAYS. Three credit hours.
- 261b. SOPHOCLES: LATER PLAYS. Three credit hours.
- 262. EURIPIDES. Three credit hours.
- 263. AESCHYLUS. Three credit hours.
- 264. ARISTOPHANES. Three credit hours.
- 271. PLATO: UTOPIA. Three credit hours.
- 272. PLATO: EARLY DIALOGUES. Three credit hours.
- 273. PLATO: MIDDLE DIALOGUES. Three credit hours.
- 274. PLATO: LATE DIALOGUES. Three credit hours.
- 275. ARISTOTLE: NICOMACHEAN ETHICS. Three credit hours.
- 276. ARISTOTLE: METAPHYSICS. Three credit hours.
- 289. LONGINUS. Three credit hours.
- 299. MASTER'S THESIS. Six credit hours.

Latin (Lt)

UNDERGRADUATE DIVISION

Lower Division Courses

- 1. ELEMENTARY LATIN. Eight credit hours. Five hours per week.
- 2. Two semesters.
- 13. LATIN COMPOSITION, I. Three credit hours.
- 14. LATIN COMPOSITION, II. Three credit hours.
- 15. INTERMEDIATE LATIN. Three credit hours. Prerequisite:
- 16. Latin 1 and 2 or their equivalent in high school. Review of grammar with special emphasis on reading; conversation and composition.
- 17. PHILOSOPHICAL LATIN. Three credit hours. An intensive review of basic syntax intended to prepare students for the reading of philosophical texts in Latin.

Classical Languages

- 20. LATIN READINGS. Two credit hours. Graded readings selected
- 21. from the Latin Fathers, philosophical and theological authors, and the classics; designed for ready grasp of Latin idiom and vocabulary building.
- 22. HORACE: ODES. Three or four credit hours.
- 28. CICERO. Three or four credit hours. The *De Senectute* and/or the *De Amicitia*.
- 51. VIRGIL: AENEID, I-VI. Three credit hours.
- 53. VIRGIL: AENEID, VII-XII. Three or four credit hours.

Upper Division Courses

Open to Advanced Undergraduates and to Graduates

- 101. ROMAN ORATORY. Three credit hours.
- 105. CLASSICAL MYTHOLOGY. Three credit hours. (Gk 105, En 105)
- 106. HISTORY OF ANCIENT ROME. Three credit hours.
- 107. CONSTITUTIONAL HISTORY OF ROME. Three credit hours.
- 108. CAESAR. Three credit hours. A study of the entire Gallic War with a consideration of Roman military history.
- 109. PLINY: SELECTED LETTERS. Three credit hours.
- 110. TACITUS: AGRICOLA, GERMANIA. Three credit hours.
- 111. LIVY. Three credit hours.
- 112. TACITUS: THE ANNALS. Three credit hours.
- 113. ADVANCED LATIN COMPOSITION. Two, three or four credit hours.
- 114. ADVANCED LATIN COMPOSITION. Two credit hours.
- 118. ROMAN HISTORIANS. Three credit hours.
- 119. CICERO: LETTERS. Three credit hours.
- 120. CICERO: PRO ARCHIA, PRO LEGE MANILIANA, AND PRO MARCELLO. Three credit hours.
- 121. CICERO: PRO MILONE. Three credit hours.
- 122. INTRODUCTION TO A STUDY OF THE LATIN FATHERS. Three credit hours.
- 123. LATIN STYLE. Two, three, or four credit hours. Translations
- 124. of standard English excerpts into Latin.

Classical Languages

- 127. ROMAN METRICS. Three credit hours.
- 128. CICERO: ESSAYS. Two or three credit hours.
- 131. HORACE: ODES. Three credit hours.
- 135. EARLY CHRISTIAN POETS. Three credit hours.
- 138. MEDIAEVAL LATIN. Three credit hours.
- 141. HORACE: SATIRES, EPISTLES. Two or three credit hours.
- 142. JUVENAL. Three credit hours.
- 151. VIRGIL: AENEID. Three credit hours.
- 161. ROMAN COMEDY. Three credit hours.
- 171. CICERO: TUSCULAN DISPUTATIONS. Three credit hours.
- 172. CICERO: DE OFFICIIS. Three credit hours.
- 183. CLASSICAL ARCHAEOLOGY. Two or three credit hours.
- 188. HISTORY OF CLASSICAL LITERATURE. Three credit hours.
- 191. LUCRETIUS. Three credit hours.
- 198a. SPECIAL STUDY. Three credit hours.
- 198b. SPECIAL STUDY. Three credit hours.
- 199. SENIOR COMPREHENSIVE REVIEW. Two or three credit hours.
Required of all seniors majoring in Latin.

GRADUATE DIVISION

- 201. LATIN PALAEOGRAPHY. Three credit hours.
- 205. ROMAN REPUBLIC. Three credit hours. (Hs 205)
- 209. EARLY ROMAN EMPIRE. Three credit hours.
- 212. THE ANNALS OF TACITUS. Three credit hours.
- 213. THE HISTORIES OF TACITUS. Three credit hours.
- 221. LETTERS OF CICERO. Three credit hours.
- 222. CONFESSIONS OF SAINT AUGUSTINE. Three credit hours.
- 223. STYLISTIC LATIN. Three credit hours.
- 224. SEMINAR IN PATRISTIC LITERATURE. Three credit hours.
- 227. ROMAN METRICS. Three credit hours.

Classical Languages

- 232. CATULLUS. Three credit hours.
- 233. ROMAN ELEGY. Three credit hours.
- 238. MEDIAEVAL LATIN. Three credit hours.
- 241. HORACE. Three credit hours.
- 242. JUVENAL. Three credit hours.
- 245. SEMINAR IN ROMAN SATIRE. Three credit hours.
- 251. VIRGIL. Three credit hours.
- 262. ROMAN COMEDY. Three credit hours.
- 291. EPICUREANISM AT ROME. Three credit hours.
- 297. HISTORICAL DEVELOPMENT OF THE LATIN LANGUAGE. Three credit hours.
- 298. SPECIAL STUDY. Three credit hours.
- 299. MASTER'S THESIS. Six credit hours.

Communication Arts (CA)

Staff: FR. FLYNN, *chairman*; MR. KVAPIL, MR. MAUPIN, MR. SIEGFRIED.

Assisted by: MR. BECKER, MR. BOISVIN, MR. FORUSZ, MR. GARTNER, MR. GREENBERGER, DR. HAEFELE, MR. LUNSFORD, MR. MEYERS, MR. WILSON, MR. WOOD, SISTER M. IGNATIUS WULFTANGE, MR. YACKS.

Lower Division Courses

- 1. ORAL COMMUNICATION. Two or three credit hours. Fundamental principles of public speaking; invention and organization of materials; style and delivery; self-confidence and positive attitudes for public speaking and conversation. Practice in preparation. Delivery of extempore speeches.
- 20. VOICE AND DICTION. Three credit hours. Principles and practice in habits of correct breathing, quality, pitch, pause, variety, and rhythm. Study and practice of consonant and vowel articulation, of diacritical marks, of pronunciation, and of correct dictionary usage.

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- 100. PERSUASION. Three credit hours. Principles and techniques of attention, suggestion, and emotional appeals. Bases of belief and action. Ethical responsibility of advocacy. Discussion methods are used to teach course content. Development of and skill in persuasion through careful analysis of theory insight and through practice in persuasive speaking. Prerequisite: CA 1.

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101. ORAL INTERPRETATION. Three credit hours. Study of the communicative art of oral interpretation of literary material. Analysis of and practice in personality projection, body control, communication of mood and emotion, vocal amplification. Listening and audience response.
105. ART OF THE FILM. Three credit hours. Discovering the art of the film through exposure to high quality films, constructive disclosure about them, specific readings, and the making of two one and one-half minute films.
106. HISTORY OF FILM MAKING AND DIRECTORS. Three credit hours. Exposure to well directed films and discussions of them. Becoming the later ego of a specific director. Making a group film. Understanding the artistic input in films.
107. FILM PROPAGANDA AND DOCUMENTARY. Three credit hours. Use of propaganda films as a means of expression and persuasion. Techniques of documentary production through ideas of Grierson and Flaherty. Propaganda techniques through studies of Riefenstahl and Capra.
108. FILM MAKING AND TECHNIQUES. Three credit hours. Basic studies in the making of a film—economic, social, and technical—conducted by students under guidance, with emphasis on film teaching. Film as a pedagogical tool, as a creative art form.

Students concentrating in radio-television should take CA 110, 112, 113, 115.

110. FUNDAMENTALS—RADIO-TV. Three credit hours. History and development of radio and television as mass media influences on society. Radio and television systems. Relay and recording methods. Development of AM, FM, and TV stations and networks. Economy, laws, and regulations of broadcasting industry (recommended for further courses).
111. CONTINUITY WRITING. Three credit hours. Fundamentals of effective commercial and program writing for radio and television. Duties and obligations of a writer. In-class writing assignments and critiques; lectures and discussions; homework assignments for stimulating the flow of ideas. Audio and visual aids for highlighting techniques. Emphasis on writing commercial copy. Prerequisite: En 3, 4 or equivalent.

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CA 112, 113, 114, 115 meet at Xavier Symmes Studios.

112. BROADCAST EQUIPMENT OPERATION. Three credit hours. (Two hours of lecture, two hours of lab weekly—one evening.) Examination of various phases of equipment from operational standpoint. Tools, techniques, and skills of radio and television. Use of microphones, sound effects, music, tape recorders, audio and video controls, film, film cameras, sets, and lighting. Studio demonstration and practice in basic program procedures.
113. BASIC TV DIRECTION-PRODUCTION. Three credit hours. (Two hours of lecture, two hours of lab weekly—one evening.) Principles and practice in directing and producing television and radio programs. Use of studio equipment in camera techniques, pictorial composition, video and audio skills. Class participation in small programs. Prerequisite or co-requisite: CA 112.
114. ADVANCED TV DIRECTION-PRODUCTION. Three credit hours. (Two hours of lecture, two hours of lab weekly—one evening.) Theories and techniques of control room directing. Proper pre-planning, quick reaction to unforeseen problems, making best possible decisions, working with people. Theories of staging, pacing, and acting. Proper dramatic effect—when and how to achieve it. Format and pace of program for best balance and timing. Prerequisite: CA 113.
115. RADIO-TV PERFORMANCE. Three credit hours. (Two hours of lecture, two hours of lab weekly—one evening.) Microphone and interpretative techniques. Guided practice in staff announcing, interviews, discussion, and audience participation. Recommended preparation: CA 20, 101.
116. EDUCATIONAL TELEVISION. Three credit hours. Study of growth and development of open circuit, closed circuit, and fixed service. Methods of television instruction and evaluation. Lecture, research, and visits to local educational television facilities. (Ed 116)
117. AUDIOVISUAL COMMUNICATION. Three credit hours. Relationship and audiovisual materials in the learning process. How these materials can enrich a particular field—their practical uses, advantages, limitations. Learning to make basic instructional materials and to use equipment. Role of the teacher and supervisor in an effective school program. (Ed 117)

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120. **SURVEY OF MASS COMMUNICATIONS.** Three credit hours. Survey of organization and functions of newspapers, magazines, radio, television, film, and other mass media for communicating information to the public. This course is introductory to study in an area of concentration in the mass media.
122. **COMMUNICATION THEORY.** Three credit hours. Process of communication as it relates to language in operation. Linguistics, an analysis of the form of language; psychology of the behavior of man; sociology of society. Process of feedback; interaction; the symbolic process; language usage and linguistics; perception; the self-image—the other-image; information theory; the culture concept.
123. **SOCIAL DYNAMICS OF COMMUNICATION.** Three credit hours. See Ps 123.
130. **SPEECH DISORDERS.** Three credit hours. Basic concepts and principles of speech pathology. Normal speech development in children. Anatomy of the speech mechanisms. Symptoms, classification, and incidence of speech disorders. (Ed 130)
132. **PHONETICS.** Three credit hours. Introduction to the phonetic structure of general American speech. Mastery of the International Phonetic Alphabet. Skill development in acoustic phonetic transcription. Analysis of dialects, distortions, and sound substitutions. Use of laboratory facilities.
133. **ARTICULATION DISORDERS.** Three credit hours. A survey of the literature pertaining to articulation disorders, including definition, diagnosis, and correction. Theory and practice in administration of articulation testing. Principles and methods for correcting articulation disorders. Observation at the Cincinnati Speech and Hearing Center and the Hamilton County Public School therapy program.
134. **SPEECH PATHOLOGY.** Three credit hours. Historical survey of pathology. Methods of testing, diagnosis, and therapy with emphasis on cleft palate, cerebral palsy, aphasia, and organic voice disorders.
140. **HISTORY OF THE THEATRE.** Three credit hours. A history of theatrical practice in the Western World with emphasis on the examination of theatres and staging technique showing the influence of acting, directing, and scenic styles. The survey embraces the western theatre from the Greek to current times. The course will be taught with the assistance of visual aids.

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141. **ACTING TECHNIQUES.** Three credit hours. (One hour of lecture, two hours of lab weekly.) Elements of acting with emphasis on coordinating speech and movement. Pantomime, improvisation, and acting. Technique of rehearsal, grouping, movement, tempo, rhythm, and line reading. Laboratory scenes. Practice in make-up.
142. **PLAY DIRECTING.** Three credit hours. Lecture-laboratory course covering basic aspects of play directing. Director's function in interpreting a play. Techniques involved in rendering this interpretation in oral and visible form in the theatre. Student participation in direction and stage management of productions.
143. **STAGECRAFT: THEATRE, TV, FILM.** Three credit hours. (Two hours of lecture, three hours of lab weekly.) Basic aspects of stagecraft for theatre, film, and television with emphasis upon the theory and practice of stage scenery construction and painting. Laboratory projects co-ordinated with Masque Society and student workshop productions.
144. **PLAY PRODUCTION.** Three credit hours. Lecture-laboratory course covering basic aspects of production. Study of organizational and technical problems of dramatic production through planning of complete amateur productions. Analysis and selection of plays. General technique of rehearsal. Basic elements of costume and make-up.
147. **THEATRE CLASSICS WORKSHOP.** Three credit hours. (One hour of lecture, three hours of lab; given in summer only.) Study and practice in all aspects of production: selection of play, rehearsals, blocking, line-reading, directing, lighting, costuming. Emphasis on classical theatre. Arena theatre facilities. High school students participate as performers and assistants.
148. **SCENIC DESIGN FOR PERFORMING ARTS.** Three credit hours. (Two hours of lecture, two hours of lab weekly.) Basic principles and history of pictorial and architectonic design as applied to drama, operatic, ballet, concert, etc., performances in theatre, film, and television. Examination of the designer's multiple analysis of the script with practice in executing sketches, models, and working drawings. Laboratory projects coordinated with Masque Society and student workshop productions. Prerequisite: CA 143.
149. **LIGHTING: THEATRE, TV, FILM.** Three credit hours. (Two hours of lecture, two hours of lab weekly.) Theories in the illumination of stage, film, and television productions.

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Examination of lighting instruments, control units, and color in the creation of aesthetic effects. Laboratory projects coordinated with Masque Society and student workshop productions. Prerequisite: CA 143 or CA 112.

153. **PLAY PRODUCTION WORKSHOP.** Three credit hours. (One hour of lecture, three hours of lab; given in summer only.) Lecture-laboratory course covering basic aspect of production. Study of organizational and technical problems of dramatic production through planning of complete amateur productions. Analysis and selection of plays. General technique of rehearsal. Basic elements of costume and make-up. Emphasis on modern plays.
157. **ORAL COMMUNICATION: WORKSHOP FOR TEACHERS.** Three credit hours. Principles, techniques, and practice in voice, diction, reading, and speaking in the classroom. Analysis of communication habits. Improved capacity as teacher, to assist students more effectively in their communication. (Ed 157)
170. **PRINCIPLES OF JOURNALISM.** Two or three credit hours. Fundamentals of modern journalism, newspapers, radio and television, and magazines. Overview of field of mass communication. Emphasis on newspaper journalism, with consideration for metropolitan and small town dailies, weeklies, community papers, and trade publications.
171. **NEWS WRITING.** Two or three credit hours. Methods of reporting and writing news, including feature and special stories. Operation of a newspaper, administration of news staff, news values. Exercises in writing news stories.
172. **WRITING FOR MASS MEDIA.** Two or three credit hours. Writing style and format used by mass media: radio and television, newspapers, and magazines. Application of these principles in practical exercises. Use of pictures and film by the media. Role of staff writer and free lance writer in mass media. Strengths and weaknesses of the media.
178. **THE ART OF THE FILM.** Two credit hours. Concentrated course in basics of film: visual communication—psychological aspects, various approaches to teaching film, film criticism; basic terminology—grammar and language of film; important aspects of motion picture development—silent-sound movies, the documentary, American and international films. Lectures and demonstrations through short films and features. Offered in Summer Intersession.

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181. **PUBLIC RELATIONS IN MODERN SOCIETY.** Two or three credit hours. Role of public relations in our modern world. Nature of communication and public opinion. Image concept and public relations research. Publicity and public relations techniques: writing the release for papers, radio, and television. Ethics. Qualifications for success.
182. **TECHNIQUES OF PUBLICITY.** Two or three credit hours. Problems of the news conference. Study of methods used to obtain publicity in mass media—radio, television, newspapers, and magazines. Practical writing experience in news releases. Health and welfare areas as subject matter. Criteria used by mass media to evaluate publicity.
183. **PUBLIC OPINION AND PROPAGANDA.** Two or three credit hours. Nature of public opinion and propaganda. Opinion research techniques. Characteristics of propaganda and its relationship to news and publicity. Propaganda techniques. Role of propaganda in American culture, especially in mass media, government, industry, and welfare.
191. **CREATIVE THINKING.** Two or three credit hours. Lecture material on the current knowledge of creativity and on individual and group methods to develop and to practice creative thinking. Practice of these techniques. Opportunity for optional creative work.
193. **RADIO-TELEVISION PRACTICUM.** One credit hour. (Three hours of lab weekly, repeatable up to four hours.) Individual study under supervision of instructor in any of the following: programming, production, direction, writing, etc. Prerequisite: Approval of instructor.
194. **THEATRE ARTS PRACTICUM.** One credit hour. (Three hours of lab weekly, repeatable up to four hours.) Individual study under supervision of instructor in any of the following: directing, acting, stage design, lighting, costuming, theatre management, etc. Prerequisite: Approval of instructor.

Economics (Ec)

Staff: DR. DONNELLY, *chairman*; FR. BESSE, DR. BRYANT, DR. GORDON, DR. HALLSTONES, MR. HALL, DR. LINK, MR. MASTRIANNA, DR. RAMINENI, DR. SCHULTZ.

Assisted by: MR. CISELL, DR. FREIBERG, MR. GERACI, MR. MANLEY, MR. ROTHWELL, DR. THIEMAN.

UNDERGRADUATE DIVISION

Lower Division Courses

33. **PRINCIPLES OF ECONOMICS.** Three credit hours. This is the standard foundation course for all fields of study in Economics and Business Administration. The course covers the fundamental principles governing present day business and economic activity. Required for all *upper division* courses in economics.
34. **PRINCIPLES OF ECONOMICS.** Three credit hours. This course emphasizes the study and analysis of selected problems in the field of business economics. Required for all *upper division* courses in economics. Prerequisite: Ec 33.
40. **CALCULUS OF ONE VARIABLE.** Three credit hours. Derivatives and integrals of algebraic and other functions used in economics. Marginal and optimality analysis and determination of elasticities. Emphasis is on applications of the calculus to problems in economics and business. Prerequisite: Mt 21 or 31. (Mt 40)

Upper Division Courses

100. **SURVEY OF ACCOUNTING.** Three credit hours. An accounting course geared to acquaint the non-accountant with the functions that underlie the creation of financial statements; the proper presentation of all items on the statement; and their use as tools by management in planning present and future business activity. (Ac 100)
116. **LABOR RELATIONS.** Three credit hours. See IR 116.
117. **ECONOMETRICS.** Three credit hours. Applications of economic theory, statistical methods, and the calculus to numerical economic data. Demand, cost, production, and other economic functions are analyzed in detail. Prerequisite: Ec 40. (Mt 117)
118. **MATHEMATICS FOR ECONOMISTS.** Three credit hours. Functions of several variables. Maxima and minima of functions. Applications of series, differential equations, and difference equations to economic problems. Prerequisite: Ec 40. (Mt 118)
119. **HISTORY OF THE LABOR MOVEMENT.** Three credit hours. See IR 119.
120. **LABOR LEGISLATION.** Three credit hours. See IR 120.

122. **CURRENT LABOR PROBLEMS.** Three credit hours. See IR 122.
130. **LABOR ECONOMICS.** Three credit hours. A survey of organized labor and labor law; examination of wage determinants and wage theory; examination of causes and remedies of unemployment. (Mg 130)
132. **ECONOMIC THEORY AND SOCIAL ORDER.** Three credit hours. A study of economics from the viewpoint of Christian ethics. The Encyclicals as they affect the science of economics and business. A course intended to help the future business man plan and preserve a code of ethics founded on solid Christian principles. A Christian Culture course.
133. **MICROECONOMIC ANALYSIS.** Three credit hours. An advanced study of economic principles including an analysis of such fundamental concepts as value and price, rent, interest, wages and profits and their relation to the current problems of production, distribution, and exchange. Prerequisite: Ec 34.
134. **MACROECONOMIC ANALYSIS.** Three credit hours. This course concentrates on an analysis of the determinants of Gross National Product, employment levels, and rates of economic growth. The analysis is conducted within a framework of principles and relationships derived from the still developing body of modern macroeconomic theory. Prerequisite: Ec 34.
135. **GOVERNMENT AND BUSINESS.** Three credit hours. A study of the structure of government in the United States with respect to government regulation of business. An analysis of the constitutional limitations; the due process of law regulations, the equal protection clause, privileges and immunities, and the extent of obligation of contract. (Po 135)
137. **ECONOMIC GEOGRAPHY.** Three credit hours. Study of world geography and the economic implications of natural resources. Emphasis on production of goods in relation to the development of agriculture, commerce, and industry in the United States and foreign countries. Prerequisites: Ec 33, 34. (Gg 137)
138. **CURRENT ECONOMIC PROBLEMS.** Three credit hours. Current problems in labor, monetary, and fiscal policy, debt management, social security legislation, public regulation of business and agriculture form a basis of discussion and analysis. Prerequisites: Ec 33, 34 and six hours upper-division credit in economics.
139. **HISTORY OF ECONOMIC THOUGHT.** Three credit hours. Study of world economic movements; analysis of literature in the

Economics

field; theories of economics advanced by Aristotle, Saint Thomas Aquinas, Adam Smith, Ricardo, Mills, Malthus, George, Clark, Bentham, Jevons, Keynes and others.

140. **ECONOMIC HISTORY OF THE UNITED STATES.** Three credit hours. A study of the development of the American economy from the period of colonization to the present. Traces the progress of population, agriculture, industry, domestic and foreign commerce, banking and finance, and transportation. Integrates the economic, social and political development in the United States.
141. **COMPARATIVE ECONOMIC SYSTEMS.** Three credit hours. Origin and development of various economic systems; analysis of their operations and purposes; a comparison of the principal types—Socialism, Fascism, Communism—with Capitalism.
143. **ECONOMICS OF THE COMMUNIST STATE.** Three credit hours. The fundamental principles of Marxist Communism; their origins in the writings of Marx, Engels, Lenin, and Stalin; their relative importance; popular and orthodox communism; critical analysis of contemporary arguments against communism.
145. **INTERNATIONAL TRADE.** Three credit hours. This course covers the theory, policy, and practice of United States trade with the rest of the world. *Theory* is covered to gain a body of knowledge needed to understand the causal relationships that underlie international economic transactions. *Policy* is studied to discover the role of government in international trade as well as international agreements between private producers. *Practice* is studied to understand the conduct of international business.
150. **MONEY AND BANKING.** Three credit hours. Structure and operation of the present money and banking system; theory and history of money; credit and commercial banking; international financial relationships; Federal Reserve System. Prerequisites: Ec 33, 34. (Fi 150)
156. **PUBLIC FINANCE AND TAXATION.** Three credit hours. Analysis of the various forms of taxation; shifting and incidence of taxation; public borrowing; non-tax revenues; public expenditures; the effects of government revenue and expenditures on our economy. (Po 156)
160. **BUSINESS FINANCE.** Three credit hours. The various types of American enterprises with special emphasis on the corporation—its organization, management, financing and budgeting.

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190. **BUSINESS STATISTICS.** Three credit hours. A study of the manner of presentation of specific and general business reports for graphic determination of economic significance. A study of mathematical tools as used in business and industry including mode, mean, median and coefficient of correlation. (BA 190)
197. **TUTORIAL COURSE.** Two or three credit hours. Special reading and study for advanced students.

Other courses acceptable for a major or minor in economics are acceptable at the discretion of the department chairman.

Education (Ed)

Staff: DR. MCCOY, *chairman*; DR. ANDERSON, DR. CLARKE, MR. COCKS, MR. GAFFNEY, DR. HALE, DR. HANNA, MR. LAGRANGE, DR. LINK, DR. LOZIER, MR. MARTIN, MISS McDERMOTT, DR. PARTRIDGE, MRS. ROTHSCHILD, MR. SCHEURER, MR. SCHWEIKERT, DR. SOMMER, MR. SULLIVAN, DR. VORDENBERG, SR. MARIE IGNATIUS WULFTANGE.

Assisted by: MR. BECKER, MR. BISHOP, MR. BOLSEN, FR. CONNELLY, MR. DAILY, MR. FLEGE, MONS. FRANER, MR. GALLENSTEIN, MR. GAROFALO, MR. GRILL, MR. HELMES, MR. HILVERS, MR. H. MORSE, MR. SETA, MR. STEELE, MR. WERNER, MRS. WERNERSBACH, MR. WOOD, MR. YACKS, AND THE DEPARTMENT OF PSYCHOLOGY.

For information about Teacher Certification, see Teacher Certification in Index.

UNDERGRADUATE DIVISION

Lower Division Courses

31. **PRINCIPLES OF EDUCATION.** Three credit hours. The role of the school in society.
41. **EDUCATIONAL PSYCHOLOGY.** Three credit hours. Psychological principles applied to learning and teaching. Prerequisite: Ps 31. (Ps 41)

Upper Division Courses

101. **SECONDARY METHODS.** Two credit hours. Methodology applicable to high school teaching in general. Methods best suited to each of the major content fields.

Education

102. **SECONDARY CURRICULUM.** Two credit hours. Functions of secondary education; curricular experiences.
103. **STUDENT TEACHING.** Six credit hours. Laboratory experience in high school teaching under the supervision of a critic teacher for one semester.
105. **TEACHING MODERN LANGUAGES.** Three credit hours. Further command of the student's language with a view to teaching effectiveness and the psychology of language learning—motivation, evaluation, and testing. Special problems.
106. **PLANNED OBSERVATION AND PARTICIPATION.** Three credit hours. A special course offered only to students preparing to be school psychologists.
107. **TEACHING INTERNSHIP I, II.** Six credit hours, two semesters.
108. A teaching internship open only to fully employed graduate students teaching on sub-standard certificates. In each semester the teacher is supervised by a clinical professor in the student's area of major competency. A 30-semester hour seminar is part of the internship. Ed 222: Current Problems of Secondary Education, two credit hours, a professional problems seminar, must be taken as a supplement to the internship.
109. **FUNDAMENTALS IN FILM STUDY.** Three credit hours. This class will examine the components of the film which can serve as the basis for more perceptive and critical viewing. Editing, composition, and the psychology of film-watching. Special orientation for preparing a high school curriculum in film study. Visiting lecturers and the showing of numerous films. (CA 109)
110. **DEVELOPMENTAL PSYCHOLOGY.** Three credit hours. See Ps 110.
111. **SOCIAL CASE WORK.** Two or three credit hours. (So 111)
116. **EDUCATIONAL TELEVISION.** Two to four credit hours. (CA 116)
117. **AUDIO-VISUAL COMMUNICATION.** Two to four credit hours. (CA 117)
118. **INTRODUCTION TO THE EMOTIONALLY DISTURBED CHILD.** Two credit hours. (Ps 118)
119. **GUIDING THE EMOTIONALLY DISTURBED CHILD.** Two credit hours. (Ps 119)

Education

120. **EDUCATING THE DISTURBED CHILD.** Two credit hours. (Ps 120)
130. **SPEECH DISORDERS.** Three credit hours. (CA 130)
131. **PSYCHOLOGICAL AND ACHIEVEMENT TESTS.** Two or three credit hours. Commonly used group tests; testing procedures and rationale underlying tests of intelligence, aptitude, achievement, interest, and personality. Selecting and evaluating specific group tests in these areas. (Ps 131)
134. **CHILD PSYCHOLOGY.** Two credit hours. The genetic study of growth and development; hereditary and environmental factors; early and later childhood to puberty. (Ps 134)
135. **ADOLESCENT PSYCHOLOGY.** Two credit hours. Interrelated physical, physiological, and mental changes associated with adolescence (Ps 135)
136. **ABNORMAL PSYCHOLOGY.** Two or three credit hours. Dynamics of a disturbed personality; symptoms, causes, and treatment of psychoneuroses, psychoses, and deviant personalities. Theoretical descriptions are illustrated through visual aids and field trips. (Ps 136)
138. **STATISTICAL TECHNIQUES.** Two or three credit hours. A study of basic statistics used in psychology and education, including sampling techniques, measures of central tendency, variability, and simple correlation. Two lectures and two laboratory periods per week. (Ps 138)
142. **MENTAL HYGIENE.** Two credit hours. A study of the progressive stages of development in emotional growth. Factors of adjustment and maladjustment in education, social relations, and occupations. (Ps 142)
146. **THE INCARNATION IN HUMAN LIFE.** Three credit hours. Orientation to contemporary theological-anthropological thought. (Th 146)
147. **FORM AND TECHNIQUE FOR THE RELIGION CLASS.** Three credit hours. Contemporary catechetical theory; analysis of texts and materials; creative response through the Arts. (Th 147)
148. **RELIGIOUS PSYCHOLOGY.** Three credit hours. Growth toward Christian maturity and the faith response. (Th 148)
149. **MORAL CATECHESIS.** Three credit hours. The Christian life in Biblical, historical, and contemporary perspective: sin, conversion, grace, the formation of conscience. (Th 149)

Education

150. MORAL PRINCIPLES IN GUIDANCE. Two or three credit hours. Principles of moral Theology as applied particularly in student guidance and counselling. (Th 150)
153. PLAY PRODUCTION WORKSHOP. Three or four credit hours. (CA 153)
155. DYNAMIC PSYCHOLOGY. Two credit hours. Critical appreciation of personality concepts and methodology of various psychotherapeutic schools. While special attention is given to Freud's contribution, other schools considered are Adlerian, Jungian, Rankian, Existential Therapy, and Client-Centered Therapy. (Ps 155)
156. PSYCHOLOGY OF DELINQUENCY. Two credit hours. A treatment of the types and causes of juvenile delinquency together with brief case histories. (Ps 156)
157. ORAL COMMUNICATION: WORKSHOP FOR TEACHERS. Three credit hours. See CA 157.
158. SOCIAL PSYCHOLOGY. Two credit hours. A study of the individual's personality, attitudes, and behavior in multi-individual situations. (Ps 158, So 158)
159. COACHING: WRESTLING. Two credit hours. Elective open to upper division students only.
160. COACHING: TUMBLING AND GYMNASTICS. Two credit hours. Elective open to upper division students only.
161. ADMINISTRATION OF PHYSICAL EDUCATION. Three credit hours. The principles, organization, and administration of the physical education program and the development of the intramural athletic program.
162. ADMINISTRATION OF HEALTH EDUCATION. Three credit hours. Methods and materials for teaching health. The selection of health material, organizational techniques, and the administration of the school health program.
- 163, 164. PHYSICAL EDUCATION METHODS AND MATERIALS. Four credit hours. The theory and practice of teaching physical education. Subject matter for use in teaching touch football, soccer and speedball, organized games, tumbling and apparatus, basketball, volleyball, conditioning, track and field, softball; physical education tactics and testing. Two semesters.
165. COACHING: FOOTBALL. One credit hour.

Education

166. COACHING: BASKETBALL. One credit hour.
- 167, 168. HEALTH AND HYGIENE. Four credit hours. Ed 167 includes the American Red Cross Standard and the Advanced First Aid course, and the prevention and treatment of athletic injuries. Ed 168 includes personal and community hygiene for use in teaching that subject. Two semesters.
169. PRACTICUM: COMMUNITY RECREATION. Two credit hours.
170. DIFFERENTIAL PSYCHOLOGY. Two credit hours. The existence, extent, and significance of individual differences in human traits. The role of heredity and environment in producing individual differences. Psychological analysis of sex, racial, national, and other group differences. (Ps 170)
171. COACHING: BASEBALL. One credit hour.
172. COACHING: TRACK AND FIELD. One credit hour.
173. THEORY OF OFFICIATING. Two credit hours. Elective open to upper division students only.
177. THEORIES OF PERSONALITY I. Two credit hours. Contributions of psychology to the study and understanding of human personality; meaning and application of different concepts in description of personality dynamics; an anthropological analysis of man; his basic emotions, their mutual relationships, and their meaning; sources of personality formation; evaluation of current personality theories. (Ps 177)
178. THEORIES OF PERSONALITY II. Two credit hours. A continuation of Ed 177. (Ps 178)
197. SPECIAL STUDY. Two or three credit hours.
198. TUTORIAL COURSE. Credit to be arranged. Special reading and directed study for advanced students.

GRADUATE SCHOOL

The Department of Education of the Graduate School is organized to offer the in-service teacher or school administrator opportunities for advanced professional training through individual courses or through balanced programs leading to the Master of Education degree.

Required of all Candidates for M.Ed. Degree

201. PHILOSOPHY OF EDUCATION. Three credit hours. The historical development of educational philosophy and theories. Evaluation of major current philosophies.

Education

- 208. EDUCATIONAL PSYCHOLOGY. Three credit hours. Major issue in the field of methods and educational psychology. The learning process. Factors influencing learning. The nature and extent of individual differences.
- 205. EDUCATIONAL ADMINISTRATION. Three credit hours. The role of the federal, state and local governments. School management including an overview of instructional personnel, business management, research, community relations and various responsibilities of the administrator.
- 207. EDUCATIONAL RESEARCH. Two and one credit hours. In this course two credit hours are devoted to major techniques and methods of educational research; comprehension of statistical terminology of research; and locating educational research on a given problem. The remaining credit hour is awarded on completion of an actual research project. A separate grade is given for each phase of the course.

Open to Graduate Students and Advanced Undergraduates

- 111. SOCIAL CASE WORK. Two or three credit hours. (So 111)
- 116. EDUCATIONAL TELEVISION. Two to four credit hours. (CA 116)
- 117. AUDIO-VISUAL COMMUNICATION. Two to four credit hours. (CA 117)
- 118. INTRODUCTION TO THE EMOTIONALLY DISTURBED CHILD. Two credit hours. (Ps 118)
- 119. GUIDING THE EMOTIONALLY DISTURBED CHILD. Two credit hours. (Ps 119)
- 120. EDUCATING THE DISTURBED CHILD. Two credit hours. (Ps 120)
- 130. SPEECH DISORDERS. Two credit hours. (CA 130)
- 131. PSYCHOLOGICAL AND ACHIEVEMENT TESTS. Two or three credit hours. (Ps 131)
- 134. CHILD PSYCHOLOGY. Two credit hours. (Ps 134)
- 135. ADOLESCENT PSYCHOLOGY. Two credit hours. (Ps 135)
- 136. ABNORMAL PSYCHOLOGY. Two or three credit hours. (Ps 136)
- 138. STATISTICAL TECHNIQUES. Two or three credit hours. (Ps 138)

Education

- 142. MENTAL HYGIENE. Two credit hours. (Ps 142)
- 155. DYNAMIC PSYCHOLOGY. Two credit hours. (Ps 155)
- 156. PSYCHOLOGY OF DELINQUENCY. Two credit hours. (Ps 156)
- 158. SOCIAL PSYCHOLOGY. Two credit hours. (Ps 158, So 158)
- 170. DIFFERENTIAL PSYCHOLOGY. Two credit hours. (Ps 170)
- 177. THEORIES OF PERSONALITY I. Two credit hours. (Ps 177)
- 178. THEORIES OF PERSONALITY II. Two credit hours. (Ps 178)

Open to Graduate Students Only

- 204. DEVELOPMENTAL PSYCHOLOGY. Three credit hours. (Ps 204)
- 207. COMPUTER THEORY AND PROGRAMMING. Two credit hours.
- 208. DATA PROCESSING AND COMPUTER TECHNIQUES. Two credit hours.
- 209. PSYCHOPATHOLOGY. Two credit hours. (Ps 209)
- 210. LEARNING AND MOTIVATION. Two or three credit hours. (Ps 210)
- 211. ELEMENTARY CURRICULUM. Two credit hours. Aims of elementary education. Specific objectives of primary and upper-elementary divisions. Classroom techniques for realizing these objectives.
- 212. CURRENT PROBLEMS OF ELEMENTARY EDUCATION. Two credit hours. A seminar.
- 213. TEACHING THE BASIC SKILLS. Two credit hours.
- 214. ADVANCED STATISTICS. Three credit hours. (Ps 214)
- 215. NEW MATHEMATICS: ELEMENTARY SCHOOL TEACHERS. Two or three credit hours.
- 216. NEW MATHEMATICS: SECONDARY SCHOOL TEACHERS: ALGEBRA. Two credit hours.
- 220. CLINICAL STUDIES: EMOTIONALLY DISTURBED CHILD. Two credit hours. (Ps 220)
- 221. SECONDARY CURRICULUM. Two credit hours. Aims of secondary education. Specific objectives of curricular areas. Classroom techniques for realizing these objectives.
- 222. CURRENT PROBLEMS OF SECONDARY EDUCATION. Two credit hours. A seminar.

Education

223. SEMINAR: BUSINESS EDUCATION. Three credit hours.
224. PROGRAMS FOR THE DISADVANTAGED CHILD. Two credit hours.
227. CURRICULUM INNOVATION: LEARNING SYSTEMS. Two credit hours.
228. PRACTICUM IN LEARNING SYSTEMS. Six credit hours.
232. EDUCATIONAL AND VOCATIONAL GUIDANCE. Two credit hours. The school's responsibility for moral, social, and vocational guidance. Essentials of an adequate guidance program.
233. COUNSELLING PRINCIPLES AND TECHNIQUES. Two credit hours. Theory of counselling. Case method. Relationships to testing and to other sources of data. Interviewing. Place and value of records. Clinical procedures.
234. ELEMENTARY SCHOOL GUIDANCE. Two credit hours.
235. OCCUPATIONAL INFORMATION AND JOB ANALYSIS. Two credit hours. (Ps 235)
237. INDIVIDUAL TESTS OF INTELLIGENCE. Four credit hours. Underlying theory, administration, scoring, interpretation, and reporting of the individual tests of intelligence.
239. GUIDANCE LABORATORY. Two credit hours. Study of individual pupils: collecting pertinent data, interviewing, recording, diagnosis, inter-agency collaboration. Practicum. Prerequisites: Ed 131, 232, 233.
241. ELEMENTARY SCHOOL ADMINISTRATION. Two credit hours. Criteria for an effective elementary school organization. Patterns of school organization. Administrative problems.
242. SECONDARY SCHOOL ADMINISTRATION. Two credit hours. Organization of secondary schools. Techniques of schedule-making. Administrative problems.
243. SUPERVISION OF INSTRUCTION. Two credit hours. Techniques of improving instruction through supervision.
244. SEMINAR: SELECTED ADMINISTRATIVE PROBLEMS. Two credit hours.
252. MONTESSORI EDUCATION: PSYCHOLOGICAL BASES. Three credit hours. (Ps 252)
253. MONTESSORI EDUCATION: HISTORICAL, THEORETICAL, AND DEVELOPMENTAL ASPECTS. Three credit hours. (Ps 253)
254. MONTESSORI METHODS AND MATERIALS: SENSORY LEVEL. Three credit hours.

Education

255. MONTESSORI METHODS AND MATERIALS: ABSTRACT LEVEL. Three credit hours.
257. MONTESSORI INTERNSHIP I. Three credit hours.
258. MONTESSORI INTERNSHIP II. Three credit hours.
261. EDUCATIONAL SOCIOLOGY. Two credit hours. Discussions and seminar work on current social problems in relation to education; e.g., poverty, race relations, population moves, social control of schools, religious tensions, etc.
263. PAROCHIAL SCHOOL SOCIAL SERVICE. Two credit hours. Special services that community agencies offer pupils. A required course for an elementary principal's certificate in the Archdiocese of Cincinnati. Open only to such candidates.
265. PAROCHIAL SCHOOL ADMINISTRATION. Two credit hours. Problems confronting the elementary school principal in schools of the Archdiocese of Cincinnati. Required course for an elementary principal's certificate in the Archdiocese of Cincinnati. Open only to such candidates.
270. PSYCHOLOGY OF READING. Two credit hours. (Ps 270)
272. SCHOOL PUBLIC RELATIONS. Two credit hours. Relations of school and community. Effective use of media of public relations—press, radio, television.
273. SCHOOL BUSINESS MANAGEMENT PROBLEMS. Two credit hours. Techniques of budgetary control, public and internal funds. School purchasing. Food service. Supplies. Equipment and machinery. School insurance. Plant records. Maintenance and repair. Pupil transportation. School investment. Management techniques.
274. ADMINISTRATION OF STAFF PERSONNEL. Two credit hours.
275. SCHOOL LAW. Two credit hours. Legal framework within which schools operate. Federal and state precedents. State code. Legal provisions for school finance.
276. SCHOOL FINANCE. Two credit hours.
277. SCHOOL BUILDINGS. Two credit hours.
278. DEVELOPMENTAL READING. Two credit hours.
- 278a-m. SPECIAL WORKSHOPS. Credit hours as offered.
279. IMPROVING READING. Two credit hours.

Education

280. REMEDIAL READING. Two credit hours. The reading process. Reading disability and its psychological problems. Diagnosis of disability. Remedial instruction.
281. CLINIC IN REMEDIAL READING. Four credit hours. Lectures and laboratory experiences in remedial reading techniques. Diagnoses and instruction of selected children with reading disabilities. Special materials fee of \$5.00.
282. NEW THEORIES IN TEACHING READING. Two credit hours.
285. INTERNSHIP IN SCHOOL RESEARCH I. Six credit hours.
286. INTERNSHIP IN SCHOOL RESEARCH II. Six credit hours.
- 288a. RESEARCH: HISTORY AND PHILOSOPHY OF EDUCATION. One or two credit hours. Individual research. Prerequisite: Ed 207.
- 288b. RESEARCH: ADMINISTRATION. One or two credit hours. Individual research. Prerequisite: Ed 207.
- 288c. RESEARCH: SECONDARY EDUCATION. One or two credit hours. Individual research. Prerequisite: Ed 207.
- 288d. RESEARCH: ELEMENTARY EDUCATION. One or two credit hours. Individual research. Prerequisite: Ed 207.
- 288e. RESEARCH: GUIDANCE. One or two credit hours. Individual research. Prerequisite: Ed 207.
- 288f. RESEARCH: REMEDIAL READING. One or two credit hours. Individual research. Prerequisite: Ed 207.
- 288g. RESEARCH: PSYCHOLOGY. One or two credit hours. Individual research. Prerequisite: Ed 207.
290. ADMINISTRATION OF SCHOOL ATHLETICS. Three credit hours. Investigation and discussion of current problems and policies pertinent to administration of school athletics.
291. LEADERSHIP IN OUTDOOR EDUCATION. Three credit hours. Consideration is given to settings for outdoor education, school camp functions, and administration. Emphasis on group and individual camping techniques.
292. ADMINISTRATION OF INTRAMURAL ATHLETICS. Three credit hours. Treatment of administrative problems, policies, and procedures involved in intramural athletics as applied to school systems.
293. FACILITIES FOR PHYSICAL EDUCATION, HEALTH, AND RECREATION. Three credit hours. A study of plan and facilities for

physical education, health, and recreation program construction, use, maintenance, safety as related to the total school and community program.

294. PHYSICAL EDUCATION FOR THE HANDICAPPED. Three credit hours. Methods, materials, and programs for the organization and administration of physical education to meet the special needs of atypical individuals in schools and the community.
295. ADMINISTRATION OF COMMUNITY RECREATION. Three credit hours. Special attention is given to the structure and principles as they are related to the organization and administration of school and community recreational programs.
296. ADMINISTRATION OF PHYSICAL FITNESS PROGRAMS. Three credit hours. A study of activities designed to enhance the primary components of physical fitness. Included are recommendations for organizing and administering a functional physical fitness program for the various sports, physical education, and the individual.
298. SPECIAL STUDY. Two or three credit hours.
299. MASTER'S THESIS. Six credit hours. For students desiring a program leading to the degree of Master of Arts.

English (En)

Staff: FR. SAVAGE, *chairman*; FR. BOWMAN, FR. CONNOLLY, DR. DEW, DR. DOERING, MR. FELDHAUS, MR. FONTANA, MR. J. A. GLENN, MR. J. P. GLENN, FR. SCHULER, FR. SHANLEY, FR. SULLIVAN, DR. WENTERSDORF, MR. WESSLING, DR. WHEELER, DR. WILLER.

Assisted by: FR. CORMAN MULLEN, MR. SCHWEIKERT.

Graduate Assistants: MR. ACITO, MR. CASTILLON, MR. DUNCAN, MR. GARDNER, MR. HELMICK, MR. HUDSON, MR. KAYNIS, MR. KELLER, MR. MEYER, MR. PHELAN, MR. VANCE.

UNDERGRADUATE DIVISION

Lower Division Courses

3. ENGLISH COMPOSITION. Three credit hours. Principles of effective writing. Exposition, argumentation.

English

4. ENGLISH COMPOSITION. Three credit hours. Description, narration. Forms of prose.
13. RHETORIC AND LITERATURE. Three credit hours. Intensified instruction and practice in effective writing. Exposition and argumentation. Analysis of selected literary works. For designated freshmen and prospective English majors.
14. RHETORIC AND LITERATURE. Three credit hours. Description, narration. Forms of prose. Selected readings. For designated freshmen and prospective English majors.
31. STUDIES IN POETRY. Three credit hours. Study and critical evaluation of English and American poetry.
32. STUDIES IN DRAMA. Three credit hours. Nature of drama and the theater; evaluation of representative plays.
34. STUDIES IN FICTION. Three credit hours. The nature of the short story and the novel. Critical evaluation of representative stories. Not open to students who have completed En 14.

Upper Division Courses

101. ADVANCED COMPOSITION FOR TEACHERS. Three credit hours. For students preparing to teach English in high school.
103. CREATIVE WRITING. Three credit hours.
105. CLASSICAL MYTHOLOGY. Three credit hours. By permission only. (Gk 105, Lt 105)
107. THEOLOGICAL THEMES IN CONTEMPORARY LITERATURE. Three credit hours.
108. THEOLOGICAL THEMES IN AMERICAN LITERATURE. Three credit hours.
109. HISTORY OF THE ENGLISH LANGUAGE. Three credit hours. A study of the origins and development of the English language between c. 450 and the present day, with special reference to etymology and vocabulary, syntax and grammar, semantics, and phonology.
111. AESTHETICS AND LITERARY CRITICISM. Three credit hours. Philosophical basis of aesthetics; elements of taste; critical standards.
112. HISTORY OF LITERARY CRITICISM. Three credit hours. A study of the major critics of literature from Aristotle to T. S. Eliot.

English

121. MODERN DRAMA. Three credit hours. English and American drama. A study of the development of the contemporary drama from Ibsen to Arthur Miller.
125. THE SHORT STORY. Three credit hours. The study, analysis and evaluation of short stories—American, British, Irish, and Continental—in relation to the elements of the short story and to the over-all effect.
130. THE ENGLISH NOVEL TO HARDY. Three credit hours. A study of the development of the English novel from Richardson and Fielding to Thomas Hardy.
140. MAJOR BRITISH AUTHORS: CHAUCER-JOHNSON. Three credit hours. Recommended for minors in English.
141. MAJOR BRITISH AUTHORS: WORDSWORTH-ELIOT. Three credit hours. Recommended for minors in English.
142. SURVEY OF ENGLISH LITERATURE TO 1750. Three credit hours. A study of the origins of English literature in both poetry and prose and its subsequent development to approximately 1750.
143. SURVEY OF ENGLISH LITERATURE SINCE 1750. Three credit hours. A study of the development of English literature in both poetry and prose from Burns and Blake to the present day.
144. MEDIEVAL ENGLISH LITERATURE. Three credit hours. Non-linguistic survey exclusive of Chaucer.
145. CHAUCER: *The Canterbury Tales*. Three credit hours. A brief introduction to Middle English and a detailed study of Chaucer's *Canterbury Tales*, with some reference to Chaucer's life and literary career.
147. THE ENGLISH RENAISSANCE. Three credit hours. Tudor humanism, religious controversy, and the Elizabethan theater.
150. SHAKESPEARE. Three credit hours. A one-semester course including about half of Shakespeare's plays with emphasis on the best plays, but with attention given also to representative plays of the four periods of his writing and to plays of the four major types—tragedy, comedy, history, and tragedy-comedy.
151. SHAKESPEARE: HISTORIES AND COMEDIES. Three credit hours. A study of the nature and development of the Shakespearean

English

- "history" as a dramatic type and of Shakespearean comedy (farce, romantic comedy, high comedy, and problem comedy).
152. **SHAKESPEARE: TRAGEDIES AND TRAGI-COMEDIES.** Three credit hours. A study of the nature and development of Shakespearean tragedy in the light of contemporary traditions and of the Aristotelian concept of tragedy, as well as a study of the Shakespearean "romance" or tragi-comedy as a dramatic type.
155. **MILTON.** Three credit hours. Milton's poetry and major prose studied for its art, its rhetoric, and its place in intellectual and literary history.
159. **SEVENTEENTH CENTURY LITERATURE.** Three credit hours. Milton is not included.
160. **NEO-CLASSICAL LITERATURE.** Three credit hours. A study of the poetry and prose of the period from Dryden to the forerunners of Romanticism, including a brief treatment of the novel of the period.
165. **ROMANTIC LITERATURE.** Three credit hours. A study of English romantic poetry and selected prose from Thomson to Keats. Special emphasis on Wordsworth, Coleridge, Byron, Shelley, Keats.
170. **VICTORIAN POETRY.** Three credit hours. A textual and critical study of selected works of Victorian poets from 1830 to 1910, with particular emphasis on Tennyson, Browning, Arnold, the Pre-Raphaelites, Hardy, and Housman.
171. **VICTORIAN NON-FICTIONAL PROSE.** Three credit hours. A study of the non-fictional prose of the Victorian period according to the important issues of that historical period.
175. **MODERN NOVEL.** Three credit hours. A study of the British and American novel from Conrad to the present.
176. **MODERN BRITISH POETRY.** Three credit hours. A study of poetry from Hardy and Hopkins to Dylan Thomas with special emphasis on Hopkins, Yeats, the Georgians, "trench poets," Eliot, Auden, and Dylan Thomas.
177. **MODERN AMERICAN POETRY.** Three credit hours. A study of poetry from Whitman to Robert Lowell.
180. **SURVEY OF AMERICAN LITERATURE.** Three credit hours. A comprehensive study of American literature, poetry and prose, from the beginning of American literature until the present day, with close critical analysis given to certain works.

English

183. **THE AMERICAN NOVEL.** Three credit hours. A study of the development of the novel in American literature together with a study of the themes and traditions specific novels represent.
194. **SPECIAL STUDY.** Credit by arrangement. Directed research.

GRADUATE DIVISION

209. **HISTORY OF THE ENGLISH LANGUAGE.** Three credit hours. Directed research in linguistic problems arising from a study of the etymology, syntax, grammar, semantics, and phonology of the English language as it developed from c. 450 to the present day.
220. **ENGLISH DRAMA TO 1642.** Three credit hours. A study of the history of English drama from the mystery plays to the closing of the theaters, exclusive of Shakespeare.
221. **RESTORATION AND EIGHTEENTH CENTURY DRAMA.** Three credit hours. A study of the drama from Dryden to Sheridan with emphasis on the heroic tragedy, comedy of manners, and sentimental comedy.
222. **STUDIES IN ENGLISH DRAMA SINCE NINETEENTH CENTURY.** Three credit hours.
228. **STUDIES IN MODERN AMERICAN DRAMA.** Three credit hours. A study of O'Neill, Miller, Williams, and Albee against the background of American theatrical development during the twentieth century.
230. **ENGLISH NOVEL OF THE EIGHTEENTH CENTURY.** Three credit hours. An historical and critical study of the English novel from Richardson and Fielding to the Gothic novel.
231. **ENGLISH NOVEL OF THE NINETEENTH CENTURY I.** Three credit hours. A study of the novels of Scott, Austen, Thackeray, and Eliot.
232. **ENGLISH NOVEL OF THE NINETEENTH CENTURY II.** Three credit hours. A study of the novels of Dickens, Hardy, Meredith, Wilde, and James.
233. **ENGLISH NOVEL OF THE TWENTIETH CENTURY.** Three credit hours. The development of the novel from Conrad and Joyce to Waugh and Greene.
240. **OLD ENGLISH LANGUAGE AND LITERATURE.** Three credit hours. An historical and critical study of representative

English

- works of Old English in the original with special attention to elegiac poetry, the Anglo-Saxon Chronicle, and the homiletic writings.
241. *BEOWULF*. Three credit hours. A literary and linguistic study of the folk epic.
244. *MEDIEVAL LITERATURE*. Three credit hours. A study of English literature from the twelfth to the fourteenth century, exclusive of Chaucer.
245. *CHAUCER AND HIS MILIEU*. Three credit hours. A study of the works of Chaucer as an interpreter of his times.
247. *EARLY TUDOR LITERATURE*. Three credit hours.
251. *SEMINAR IN SHAKESPEARE: HISTORIES AND COMEDIES*. Three credit hours. Prerequisite: En 151 or its equivalent.
252. *SEMINAR IN SHAKESPEARE: TRAGEDIES AND TRAGI-COMEDIES*. Three credit hours. Prerequisite: En 152 or its equivalent.
255. *SEMINAR IN MILTON*. Three credit hours. Prerequisite: En 155 or its equivalent.
257. *STUDIES IN SEVENTEENTH CENTURY LITERATURE*. Three credit hours.
260. *STUDIES IN NEO-CLASSICAL LITERATURE*. Three credit hours.
265. *STUDIES IN ROMANTIC LITERATURE*. Three credit hours.
270. *STUDIES IN VICTORIAN POETS*. Three credit hours.
271. *STUDIES IN VICTORIAN NON-FICTIONAL PROSE*. Three credit hours.
275. *STUDIES IN THE MODERN NOVEL*. Three credit hours.
276. *STUDIES IN MODERN POETRY*. Three credit hours.
282. *STUDIES IN EARLY AMERICAN NOVEL*. Three credit hours.
283. *STUDIES IN NINETEENTH CENTURY AMERICAN NOVEL*. Three credit hours.
284. *STUDIES IN TWENTIETH CENTURY AMERICAN NOVEL*. Three credit hours.
285. *SEMINAR IN AMERICAN AUTHORS*. Three credit hours. Authors to be specified by the professor.
286. *SEMINAR IN NINETEENTH CENTURY AMERICAN POETS*. Three credit hours. Poets to be specified by the professor.

English

287. *SEMINAR IN MODERN AMERICAN POETS*. Three credit hours. Poets to be specified by the professor.
290. *SEMINAR IN CHAUCER*. Three credit hours.
291. *SEMINAR IN THE RENAISSANCE*. Three credit hours.
292. *SEMINAR IN SEVENTEENTH CENTURY LITERATURE*. Three credit hours.
293. *SEMINAR IN NEOCLASSICISM*. Three credit hours.
294. *SEMINAR IN ROMANTICISM*. Three credit hours.
295. *SEMINAR IN VICTORIAN LITERATURE*. Three credit hours.
296. *SEMINAR IN MODERN BRITISH POETS*. Three credit hours.
297. *SEMINAR IN MODERN BRITISH DRAMA*. Three credit hours.
298. *SEMINAR IN MODERN BRITISH NOVEL*. Three credit hours.
299. *MASTER'S THESIS*. Six credit hours.

The contents of individual seminars will be specifically noted in the bulletins issued prior to each semester by the Graduate School.

Geography (Gg)

Staff: DR. LINK.

The Department of Geography is administered by the Dean of the College of Arts and Sciences. Courses are intended to augment the student's background in economics, science, and education.

Lower Division Courses

1. *ELEMENTS OF GEOGRAPHY*. Three credit hours.
2. *WORLD GEOGRAPHY*. Three credit hours. A study of space and distance relations on the earth; the distribution of natural features, resources, population; major commodities; transportation; world trade.

Upper Division Courses

120. *GEOGRAPHY OF EUROPE*. Three credit hours.
137. *ECONOMIC GEOGRAPHY*. Three credit hours. Study of world geography and the economic implications of natural re-

Geography

sources. Emphasis on production of goods in relation to the development of agriculture, commerce, and industry in the United States and foreign countries. Prerequisites: Ec 33, 34. (Ec 137)

160. GEOGRAPHY OF LATIN AMERICA. Two or three credit hours.

175. POLITICAL GEOGRAPHY. Three credit hours. (Po 175)

History and Political Science

Staff: DR. SIMON, *chairman*; FR. BENNISH, MR. FORTIN, DR. GOODMAN, FR. JOHNSON, FR. KAPICA, FR. LINK, MR. MCVAY, DR. MEISTER, MR. MOULTON, FR. SHIELDS.

Assisted by: MRS. BURKE, MR. HENNIE, MR. SEHER.

Graduate Fellows: MR. BARRETT, MR. BERGMAN, MR. CONWAY, MR. GILL, MR. KOHLER.

History (Hs)

UNDERGRADUATE DIVISION

Lower Division Courses

7. EUROPE TO 1648. Three credit hours. A broad survey of the growth of European society and culture.

8. EUROPE SINCE 1648. Three credit hours. A continuation of Hs 7.

Upper Division Courses

100. HISTORY OF ANCIENT GREECE. Three credit hours. The politics and society of old Greece. (Gk 100)

104. CHRISTIAN ANTIQUITY. Three credit hours. Early Christian society through the Patristic age.

106. HISTORY OF ANCIENT ROME. Three credit hours. The making of the foremost political creation of antiquity, its spread and its dissolution. Great Roman institutions and cultural monuments. (Lt 106)

107. CONSTITUTIONAL HISTORY OF ROME. Three credit hours. Development of the structure of law and justice. (Lt 107 and Po 107)

111. EARLY MIDDLE AGES, 300-1154. Three credit hours. Social and cultural change from the Age of Constantine to the Twelfth Century Renaissance.

History

112. THE HIGH MIDDLE AGES, 1154-1453. Three credit hours. Social organization. Political and artistic achievements. Education. Secularism and decline.

117. SURVEY OF ASIAN HISTORY. Three credit hours. From the beginning to the first European penetration.

118. SURVEY OF ASIAN HISTORY. Three credit hours. From the beginning of European penetration to the modern time.

119. RENAISSANCE AND HUMANISM. Three credit hours. Climax of the Middle Ages in fine arts, economy, and expansion of town life. Shifting patterns in government. Critical spirit and return to classical norms. Changes in education.

121. RELIGIOUS UPHEAVAL IN THE 1500's. Three credit hours. Individualism supplanting social outlook. Factors that split Christianity and divided the Medieval Republic.

122. EUROPE IN THE SEVENTEENTH CENTURY. Three credit hours. A study of the culture and politics of the Century of Expansion.

124. FRENCH REVOLUTION. Three credit hours. Causes of modern revolutionary spirit. Philosophies and bourgeois radicals. Constitutions and oppositions. Napoleon and Pitt.

125. NINETEENTH CENTURY EUROPE To 1870. Three credit hours. A study of Europe from Napoleon to Bismarck, with special attention to the romantic movement, liberalism, conservatism, nationalism, the economic revolution, and the rise of socialism.

126. CONTEMPORARY EUROPE SINCE 1870. Three credit hours. Material progress and social ferment. Imperialism and alliances. The First World War and its aftermath. Totalitarian regimes and the Second World War. Postwar Europe.

127. AMERICAN STUDIES TO 1877. Three credit hours. A study of America from Puritan times through Reconstruction. Emphasis on the religious, political, and social influences in the formation of the American character.

128. AMERICAN STUDIES FROM 1877 TO THE PRESENT. Three credit hours. A continuation of Hs 127. Emphasis on the influence of Social Darwinism and Marxism in America and the effects of the conflict between isolationism and internationalism on the American character.

History

129. A HISTORY OF RACIAL AND ETHNIC GROUPS IN AMERICA.
130. Three credit hours. A study of the major racial and ethnic groups in America and their relationship to one another. Emphasis on slavery, immigration, and the assimilation of these groups into the American character.
131. ENGLAND TO 1603. Three credit hours. England from primitive times through Roman and medieval cultural development.
132. ENGLAND SINCE 1603. Three credit hours. Struggle for constitutional government. Overseas possessions. Industrial Revolution. Political domination of the world. Crises born of two wars.
133. HISTORY OF SOUTHEAST ASIA. Three credit hours each semester.
134. A general survey of Burma, Thailand, Laos, Cambodia, Vietnam, Malaysia, Indonesia, Philippines.
135. EARLY COLONIAL HISTORY, 1607-1763. Three credit hours.
136. THE NEW NATION, 1785-1825. Three credit hours.
137. HISTORY OF AUSTRALIA AND OCEANIA. Three credit hours.
138. HISTORY OF HINDUISM AND BUDDHISM. Three credit hours. (Pl 138)
140. HISTORY OF AMERICAN POLITICAL PARTIES. Three credit hours. Party formation and party rule in the United States. (Po 140)
141. UNITED STATES TO 1865. Three credit hours. Colonial base. Break from England. Confederation and Constitution. Federalists. Jeffersonian and Jacksonian democracy. The Tragic Era. Graduate credit not given.
142. UNITED STATES SINCE 1865. Three credit hours. Reconstruction. Continental expansion. Rise of cities. Social questions. International influence. Graduate credit not given.
143. FORMATIVE YEARS OF THE REPUBLIC, 1763-1789. Three credit hours. Thirteen colonies become a national state. Emphasis on the causes of the American Revolution and the writing of the Constitution of 1789.
144. SECTIONALISM, 1825-1861. Three credit hours. Statesmen and constitutional discussion. Rising Northern industry. The

History

- West is heard from. An entrenched South. Disuniting factors. Clash of wealth and ideas. The final appeal.
145. CIVIL WAR AND RECONSTRUCTION, 1861-1885. Three credit hours. War. Healing wounds. Railroads and Western states. A "New South." Republican national hegemony. Higher education. Impacts of immigration and labor.
 146. AGE OF BIG BUSINESS, 1885-1920. Three credit hours. Economic surge with its social and political sequel.
 147. UNITED STATES IN THE TWENTIETH CENTURY. Three credit hours. A history of the United States since 1919. Emphasis on the social and political tensions found in America during these years.
 148. CONSTITUTIONAL HISTORY OF THE UNITED STATES. Three credit hours. Elements active in colonial times. Making the Constitution. Amendments and interpretations. Changing attitudes, new conditions of life, fresh ideas.
 149. CATHOLIC CHURCH IN THE UNITED STATES. Three credit hours. Origin, growth, and participation of the Church in American society, in education, and in institutions.
 150. HISTORY OF OHIO. Three credit hours. Political and cultural patterns in the state. The part it played in national society.
 151. COLONIAL HISPANIC AMERICA, 1492-1810. Three credit hours. A course in the organization of empire by Spain and Portugal. Cultural and economic institutions. Administration. The missions basic to the story. Trade problems. Vast expansion. Decision for independence.
 152. HISPANIC AMERICA SINCE 1810. Three credit hours. Wars. Forming nations and governments. Religion vs. the State. Arts and letters. Foreign influence in economic affairs. Political thought. Making the OAS.
 153. HISTORY OF MEXICO. Three credit hours. Archeology. Fusion of Spaniard and native spirit. Missions. Viceroyalty. Independence. Administrative quandries. Foreign relations. Losses to the United States. Juarez and Positivism. Diaz and dictatorship. Carranza, "Revolution," and peace.
 154. THE A. B. C. POWERS. Three credit hours. The history and development of Argentina, Brazil, and Chile from the Age of Discovery to the present.

History

156. HISTORY OF THE WEST, 1500-1783. Three credit hours. Study of the western movement as a mold of national character. English, French, and Spanish contributions. Peopling virgin land. Origins of American political ideas.
157. HISTORY OF THE WEST SINCE 1783. Three credit hours. A continuation of Hs 156, through the process of occupying the entire continental territory and emphasizing state-making; cultural changes; paternalism and hardy pioneers; repeated frontier experiences; the Far West; the making of America.
158. RISE OF THE AMERICAN CITY. Three credit hours. Emergence and importance of the city in socio-political America. (Po 158)
159. INTELLECTUAL HISTORY OF THE UNITED STATES. Three credit hours.
160. HISTORY OF AMERICAN POLITICAL INSTITUTIONS. Three credit hours. The origin and development of the American political regime. Special attention to Colonial Congresses, the Articles of Confederation, the Constitutional Convention, and the development of the legislative, executive, and judicial departments of the federal government. (Po 160)
161. HISTORY OF SPAIN. Three credit hours. Spain is studied as the parent nation in forming America and as a vigorous protagonist in the European drama. Prehistory. Roman Spain. Visigothic and Moorish cultures. The Reconquest. Golden Age and empire. Recession and modern problems.
163. MODERN GERMANY SINCE 1815. Three credit hours. A study of the political, economic, social, and cultural forces which have shaped modern Germany, with special attention to the strong personalities who have guided Germany's destiny, and to Germany's role in world affairs.
165. TWENTIETH CENTURY EASTERN EUROPE. Three credit hours. Cultural and political developments following upon World War I and II.
166. HISTORY OF RUSSIA. Three credit hours. From Vladimir to Stalin. Early Byzantine contact. Mongol rule. Rise of the Romanovs. Westernization conflicting with oriental tradition. Industrial Revolution. Science and culture. Red Revolution. Present position in the world.
168. SOVIET RUSSIA TO THE PRESENT. Three credit hours. Study of internal institutions of Soviet regime. Immediate back-

History

- ground in the Nineteenth Century. The Communist Party. Apparatus of Soviet government. Impact of Marxist thought on Russian culture. (Po 168)
- 169, 170. HISTORY OF SOUTH ASIA. Three credit hours each semester. A general survey of India, Pakistan, Ceylon, Nepal, Bhutan, Sikkim.
171. INTER-AMERICAN RELATIONS TO 1903. Three credit hours. United States interests in and association with other American states, and their own inter-relations. The Monroe Doctrine. The Panama Question. (Po 171)
172. INTER-AMERICAN RELATIONS SINCE 1903. Three credit hours. The sequel of Hs 171. Political geography changes. Unity and disunity. Interventions. International conventions. "The Good Neighbor Policy." Regional unity. (Po 172)
173. UNITED STATES FOREIGN RELATIONS TO 1900. Three credit hours. America gropes toward world status in interest and influence. (Po 173)
174. UNITED STATES FOREIGN RELATIONS SINCE 1900. Three credit hours. Toward world power and worldwide responsibility. (Po 174)
177. INTERNATIONAL RELATIONS. Three credit hours. The theory of international relations. Elements of national power. Formulation and shaping of foreign policy. Diplomacy. International economics. Propaganda and ideology. Imperialism and colonialism. International organizations.
- 179, 180. NATIONALISM AND COMMUNISM IN ASIA. Three credit hours each semester. A study of the rise of Communist power in China and the nationalist and communist movements in neighboring areas.
- 181, 182. HISTORY OF THE MIDDLE EAST AND NORTH AFRICA. Three credit hours each semester. A general survey of the Middle East and North Africa from the Prophet Mohammed to the present.
- 183, 184. HISTORY OF JAPAN. Three credit hours each semester. A general survey of Japanese history from the earliest times to the present.
185. HISTORY OF CHINA. Three credit hours. A general survey of Chinese history from the earliest times through the Ming Dynasty.

History

186. HISTORY OF CHINA. Three credit hours. A general survey of Chinese history from the Manchu Dynasty to the present.
188. HISTORY OF AFRICA BELOW THE SAHARA. Three credit hours each semester. A general survey of African history below the Sahara from the earliest times to the present.
189. each semester. A general survey of African history below the Sahara from the earliest times to the present.
190. AN INTELLECTUAL HISTORY OF EARLY EUROPE. Three credit hours. The interaction of historically important ideas—religious, political, literary—with the social milieu from which they emerged from antiquity to the Sixteenth Century. The continuity of classical and medieval cultures.
191. AN INTELLECTUAL HISTORY OF MODERN EUROPE. Three credit hours. A study of the interaction of historically important ideas—religious, political, literary—with the social milieu from which they emerged from the Sixteenth Century, stressing the Nineteenth and Twentieth Centuries.
192. NATIONALISM IN MODERN TIMES. Three credit hours. An analysis of the principle of nationality and its relation to human nature and culture, biological heredity, and physical environment, followed by an exposition of the development of national consciousness and nationalist doctrines, and a survey of nationalist movements and their effects upon domestic and international politics.
194. HISTORICAL CRITICISM. Three credit hours. An undergraduate study of the canons of historical literature as found in its more notable productions. The problem of evidence. Truth in history. (Spring semester of senior class.)
198. ADVANCED READING AND RESEARCH. Three credit hours. Tutorial course for more gifted students under staff direction.

GRADUATE DIVISION

201. HISTORICAL METHOD. Three credit hours. Ordinarily prerequisite to and required in all cases for graduate students in history. A course in approach to research adapted to the degree of Master of Arts in history and to seminar work for that degree.
202. GREECE, THE FIFTH CENTURY. Three credit hours. (Gk 202)
203. GREECE TO 480. Three credit hours. (Gk 201)
205. ROMAN REPUBLIC. Three credit hours. (Lt 205)
209. EARLY ROMAN EMPIRE. Three credit hours. (Lt 209)

History

225. SEMINAR: MODERN EUROPE. Three credit hours each semester.
226. Prerequisite: Upper division work in modern European history and a reading knowledge of a modern foreign language. The seminar will be restricted to work in Western Europe. Either semester may be taken independently.
235. SEMINAR: SOUTH AND SOUTHEAST ASIA. Three credit hours.
243. "NEW ORDERS" OF THE TWENTIETH CENTURY. Three credit hours. A research course.
244. SEMINAR: JACKSONIAN ERA. Three credit hours.
246. SEMINAR: THE AGE OF BIG BUSINESS. Three credit hours.
247. SEMINAR: THE UNITED STATES IN THE TWENTIETH CENTURY. Three credit hours.
249. SEMINAR: CATHOLIC CHURCH IN THE UNITED STATES. Three credit hours.
251. SEMINAR: COLONIAL HISPANIC AMERICA. Three credit hours.
252. SEMINAR: REPUBLICAN HISPANIC AMERICA. Three credit hours.
256. SEMINAR: THE WEST TO 1783. Three credit hours. Based on the idea of Hs 156.
257. SEMINAR: THE WEST SINCE 1783. Three credit hours. Based on the idea of Hs 157.
258. SEMINAR: THE AMERICAN CITY. Three credit hours.
265. SEMINAR: TWENTIETH CENTURY EASTERN EUROPE. Three credit hours.
274. SEMINAR: UNITED STATES FOREIGN RELATIONS. Three credit hours. (Po 274)
285. SEMINAR: CHINA AND JAPAN. Three credit hours.
299. MASTER'S THESIS. Six credit hours.

Political Science (Po)

UNDERGRADUATE DIVISION

Lower Division Courses

1. GOVERNMENT IN SOCIETY. Three credit hours.
2. AMERICAN GOVERNMENT. Three credit hours.

Upper Division Courses

107. CONSTITUTIONAL HISTORY OF ROME. Three credit hours.
(Hs 107, Lt 107)
112. FOREIGN AFFAIRS IN THE UNITED STATES. Three credit hours.
Organization and operation of the State Department. The foreign service. Congress and other agencies.
121. COMPARATIVE GOVERNMENT. Three credit hours. An introduction to comparative government concentrating on the constitutional history of Great Britain and France. The course also deals with types of governments, parties, electoral systems, and problems of stability and democracy.
122. THE POLITICS OF GERMANY. Three credit hours. A study of the political institutions and the constitutional development of Germany since 1918.
131. ANCIENT AND MEDIEVAL POLITICAL PHILOSOPHY. Three credit hours. Early theories of government; growth of kingship, parliamentary ideas, English liberties; continental tendencies; canon law; secularism. Prerequisite: Junior standing.
132. MODERN POLITICAL PHILOSOPHY. Three credit hours. Rise of absolutism; modern democratic thought; international law; force doctrines; materialistic theories; Papal pronouncements. Prerequisite: Po 131.
133. HISTORY OF SOUTHEAST ASIA. Three credit hours each semester.
134. A general survey of Burma, Thailand, Laos, Cambodia, Vietnam, Malaysia, Indonesia, Philippines.
135. GOVERNMENT AND BUSINESS, I. Three credit hours. A study of the structure of government in the United States with respect to government regulation of business. An analysis of the constitutional limitations: the due process of law regulation, the equal protection clause, privileges and immunities, and the extent of obligation of contract. (Ec 135)
136. GOVERNMENT AND BUSINESS, II. Three credit hours. A study of federal labor law, federal regulation of agriculture, government taxing and spending policies, and the power of eminent domain. An analysis of the administrative and enforcement problems encountered in carrying out the government's policies. An exposition of the influence of mercantilism, economic liberalism, Keynesian theory, and national socialism on government regulation of business. (Ec 136)
137. HISTORY OF AUSTRALIA AND OCEANIA. Three credit hours.

138. HISTORY OF HINDUISM AND BUDDHISM. Three credit hours.
(Pl 138)
140. HISTORY OF AMERICAN POLITICAL PARTIES. Three credit hours.
(Hs 140)
141. THE PRESIDENCY. Three credit hours. National Administration. Federal-State relationships. The constitutional concept of the office. The President as administrator, as commander-in-chief in wartime, as organ of foreign relations, and as political leader.
142. THE CONGRESS. Three credit hours. Congress, courts, structure, policies. The legislative process first in its constitutional concept and then in its political operation as related to the President and Congress.
148. CONSTITUTIONAL HISTORY OF THE UNITED STATES. Three credit hours. See Hs 148.
151. INTERNATIONAL LAW. Three credit hours. Origins and development. Territory and jurisdiction of States. Nationality. International claims. Diplomatic and consular officials. Treaties. Legal regulation of the use of force. International organizations.
152. THE UNITED NATIONS. Three credit hours. From the League of Nations to the United Nations. Purposes and principles, politics and law in the U.N. Basic structure, voting procedures, and political transformations of the U.N. Major U.N. cases.
156. PUBLIC FINANCE AND TAXATION. Three credit hours. (Ec 156)
158. RISE OF THE AMERICAN CITY. Three credit hours. Emergence and importance of the city in socio-political America.
(Hs 158)
160. HISTORY OF AMERICAN POLITICAL INSTITUTIONS. Three credit hours. See Hs 160.
168. SOVIET RUSSIA TO THE PRESENT. Three credit hours. See Hs 168.
169. HISTORY OF SOUTH ASIA. Three credit hours each semester.
170. A general survey of India, Pakistan, Ceylon, Nepal, Bhutan, Sikkim.
171. INTER-AMERICAN RELATIONS TO 1903. Three credit hours.
(Hs 171)
172. INTER-AMERICAN RELATIONS SINCE 1903. Three credit hours.
(Hs 172)

Political Science

173. UNITED STATES FOREIGN RELATIONS TO 1900. Three credit hours. (Hs 173)
174. UNITED STATES FOREIGN RELATIONS SINCE 1900. Three credit hours. (Hs 174)
175. POLITICAL GEOGRAPHY. Three credit hours. The geographical basis of national life. Location. Raw materials. Population. Groupings of interest. Rejection of geopolitical determinism.
177. INTERNATIONAL RELATIONS. Three credit hours. (Hs 177)
179. NATIONALISM AND COMMUNISM IN ASIA. Three credit hours each semester. A study of the rise of Communist power in China and the nationalist and communist movements in neighboring areas.
181. HISTORY OF THE MIDDLE EAST AND NORTH AFRICA. Three credit hours each semester. A general survey of the Middle East and North Africa from the Prophet Mohammed to the present.
183. HISTORY OF JAPAN. Three credit hours each semester. A general survey of Japanese history from the earliest times to the present.
184. HISTORY OF CHINA. Three credit hours. A general survey of Chinese history from the earliest times through the Ming Dynasty.
186. HISTORY OF CHINA. Three credit hours. A general survey of Chinese history from the Manchu Dyansty to the present.
187. COMMUNISM: NATURE, OBJECTIVES, STRATEGY, TACTICS. Three credit hours.
188. HISTORY OF AFRICA BELOW THE SAHARA. Three credit hours each semester. A general survey of African history below the Sahara from the earliest times to the present.
195. REBUILDING THE SOCIAL ORDER. Two credit hours. (So 195)
198. ADVANCED READING AND RESEARCH. Credit arranged.
199. SENIOR COMPREHENSIVE REVIEW. Two credit hours. Required of all seniors majoring in political science.

Mathematics

Mathematics (Mt)

Staff: DR. LARKIN, *chairman*; MR. BRUGGEMAN, DR. CERIMELE, MR. CISELL, MRS. DAVIDOFF, MR. DELANEY, MR. FLASPOHLER, FR. ISENECKER, MR. NIEHAUS, MR. STRUNK.

Assisted by: MR. BESCO, MR. BROWN, MR. CHARRIER, MR. COLLINS, MR. CUMMINGS, MR. FEIGE, DR. GRACE, FR. GREEN, MR. KLEE, MR. TOTTEN.

Graduate Assistants: MR. COX, MR. DEW, MR. DIETZ, MR. KLUS, MR. MARATTA, MR. THIERAUF, MRS. WELCH.

UNDERGRADUATE DIVISION

Lower Division Courses

11. COLLEGE MATHEMATICS I. Three credit hours. Introduction to finite mathematics: analysis of compound statements, elementary set theory, permutations and combinations, and probability.
12. COLLEGE MATHEMATICS II. Three credit hours. Continuation of probability, vectors and matrices, simple game theory, applications (especially to behavioral sciences). Prerequisite: Mt 11.
21. MATHEMATICS OF ECONOMICS. Three credit hours. Graphing of functions. Linear, exponential, logarithmic, and quadratic functions. Systems of linear functions and functions of more than one variable.
22. MATHEMATICS OF FINANCE. Three credit hours. Compound interest and discount, annuities, amortization and sinking funds, depreciation, bonds, life insurance.
31. ALGEBRA AND TRIGONOMETRY. Three credit hours. The circular functions and applications, relation of circular functions to angles, inverse circular functions. Linear and quadratic functions, determinants, binomial theorem, mathematical induction.
40. CALCULUS OF ONE VARIABLE. Three credit hours. Derivatives and integrals of algebraic and other functions used in economics. Marginal and optimality analysis and determination of elasticities. Emphasis is on applications of the calculus to problems in economics and business. Prerequisite: Mt 21 or 31. (Ec 40)

Mathematics

45. **VECTORS AND GEOMETRY.** Three credit hours. Vector arithmetic, vector analytic geometry, conics, quadrics, polar, spherical and cylindrical coordinates, complex number arithmetic, matrices, determinants, computer orientation. Prerequisite: Equivalent of Mt 31.
48. **FORTRAN PROGRAMMING.** Three credit hours. Exhaustive treatment of Fortran II computer programming language. Introduction to Fortran IV.
60. **CALCULUS I.** Three credit hours. Rate of change of a function, derivatives of algebraic functions, curve plotting, max-min problems, integration, inverse trigonometric functions. Prerequisite: Equivalent of Mt 31.
61. **CALCULUS II.** Three credit hours. Applications of integration, transcendental functions, methods of integration, elementary mechanics of series, introduction to differential equations. Prerequisite: Mt 60.
97. **TUTORIAL STUDY.** Credit by arrangement.

Upper Division Courses

100. **COMPUTATIONAL MATHEMATICS.** Three credit hours. Computer oriented solutions of algebraic equations, matrix algebra, least squares curve fitting, numerical integration, polynomial interpolation. Prerequisite: Computer Programming.
107. **INTRODUCTION TO INFINITE SERIES.** Three credit hours. Limit of sequence and series of real numbers, comparison, ratio and root tests, sequences and series of functions, L'Hospital's Rule, definition and properties of power series, Taylor's series, series solutions of differential equations, Fourier Series. Prerequisite: Mt 61.
109. **ADVANCED CALCULUS I.** Three credit hours. Functions of several variables, partial differentiation, exact differentials, exact differential equations, integrating factors, vector calculus, multiple integrals. Prerequisites: Mt 45, 61.
110. **ADVANCED CALCULUS II.** Three credit hours. Line and surface integrals, transformation of coordinates, integral theorems, hyperbolic functions, LaPlace Transforms, systems of differential equations, partial differential equations. Prerequisite: Mt 109.
117. **ECONOMETRICS.** Three credit hours. Applications of economic theory, statistical methods, and the calculus to numerical

Mathematics

- economic data. Demand, cost, production, and other economic functions are analyzed in detail. Prerequisite: Mt 40. (Ec 117)
118. **MATHEMATICS FOR ECONOMISTS.** Three credit hours. Functions of several variables. Maxima and minima of functions. Applications of series, differential equations, and difference equations to economic problems. Prerequisite: Mt 40. (Ec 118)
120. **OPERATIONS RESEARCH.** Three credit hours. Mathematical models and associated operations research methodology. Inventory models, linear programming, queuing theory, simulation, game theory, computational methods. Prerequisite: Mt 124.
- 124, 125. **MATHEMATICAL STATISTICS I, II.** Three credit hours each semester. Probability, probability distributions (discrete, continuous, univariate, multivariate), characteristics of distributions, sampling. Estimation, hypothesis testing, confidence methods, regression analysis, factorial designs, experimental design, sampling inspection, non-parametric methods.
128. **NUMERICAL ANALYSIS I.** Three credit hours. Methods for solving mathematical problems on automatic digital computers. Interpolation, error analysis, numerical differentiation and integration, solution of linear equations, approximation of functions by polynomials. Prerequisites: Mt 144 and Computer Programming.
129. **NUMERICAL ANALYSIS II.** Three credit hours. Extension of Mt 128. Solution of ordinary and partial differential equations, non-linear systems of equations, non-polynomial approximation of functions, Fourier series, computation of eigenvalues and eigenvectors of matrices. Prerequisite: Mt 128.
130. **THEORY OF NUMBERS.** Three credit hours.
132. **NUMERICAL LINEAR ALGEBRA.** Three credit hours. Computational methods in linear algebra. Solution of systems of linear equations. The algebraic eigenvalue problem. Analysis of errors and the machine testing of various direct and iterative methods. Prerequisites: Mt 144 and Computer Programming.
133. **NUMERICAL METHODS OF NON-LINEAR SYSTEMS.** Three credit hours. Extension of Mt 132 to non-linear systems. Special topics. Prerequisite: Mt 132.

Mathematics

136. TOPICS IN CALCULUS AND GEOMETRY FOR TEACHERS. Six credit hours. The rate of change of a function, derivatives of algebraic functions, plane analytic geometry, integration, vectors, and parametric equations. Credit may be applied only toward M.Ed. degree.
137. TOPICS IN LOGIC AND MODERN ALGEBRA. Six credit hours. Credit may be applied only toward M.Ed. degree.
138. TOPICS IN GEOMETRY AND STATISTICS. Six credit hours. Credit may be applied only toward M.Ed. degree.
140. LINEAR PROGRAMMING. Three credit hours. The assignment problem, transportation problem, the simplex method, duality. Emphasis is on computer methods. Prerequisite: Mt 144.
144. MATRICES AND VECTOR SPACES. Three credit hours. Algebra of matrices, determinants, inverses, groups of transformations, vector spaces, linear and bilinear mappings, introduction to algebraic structures, and eigenvalues.
145. INTRODUCTION TO MODERN ALGEBRA. Three credit hours. Groups, isomorphism, homomorphism, rings, ideals, fields, linear congruences, real numbers. Prerequisite: Mt 144.
151. PARTIAL DIFFERENTIAL EQUATIONS. Three credit hours. First order linear and quasilinear equations, hyperbolic, elliptic, and parabolic equations, and method of characteristics.
155. ADVANCED ORDINARY DIFFERENTIAL EQUATIONS I. Three credit hours. Existence and uniqueness, phase-plane concepts, elementary critical points and stability theory, second order linear equations with variable coefficients, forced oscillations of linear systems, and Sturm-Liouville systems.
156. SEQUENCES AND SERIES. Three credit hours. Convergence of sequences and series of constants and functions, expansion of functions in power and Fourier series, introduction to summability.
157. ORTHOGONAL FUNCTIONS. Three credit hours.
158. INTERMEDIATE ANALYSIS. Three credit hours. Elements of set theory, numerical sequences and series, continuity, differentiation. Sequences and series of functions, and Riemann-Stieltjes integral.
159. INTRODUCTION TO COMPLEX VARIABLE. Three credit hours. Complex numbers, sequences and series of numbers and functions, analytic functions, Cauchy integral theorem, power series, residues.
160. ELLIPTIC AND HYPERBOLIC FUNCTIONS. Three credit hours.

Mathematics

162. PROJECTIVE GEOMETRY. Three credit hours.
165. MATHEMATICAL LOGIC. Three credit hours.
177. VECTOR AND TENSOR ANALYSIS I. Three credit hours. Fundamental operations, differentiation and integration of tensor fields, integral theorems, tensors in Cartesian orthogonal coordinates, and applications. Prerequisites: Mt 144, 158.
181. ELEMENTARY TOPOLOGY. Three credit hours. Topology of metric spaces, limits, continuity, compactness, and connectedness.
197. SPECIAL READING AND STUDY FOR ADVANCED STUDENTS. Credit by arrangement.

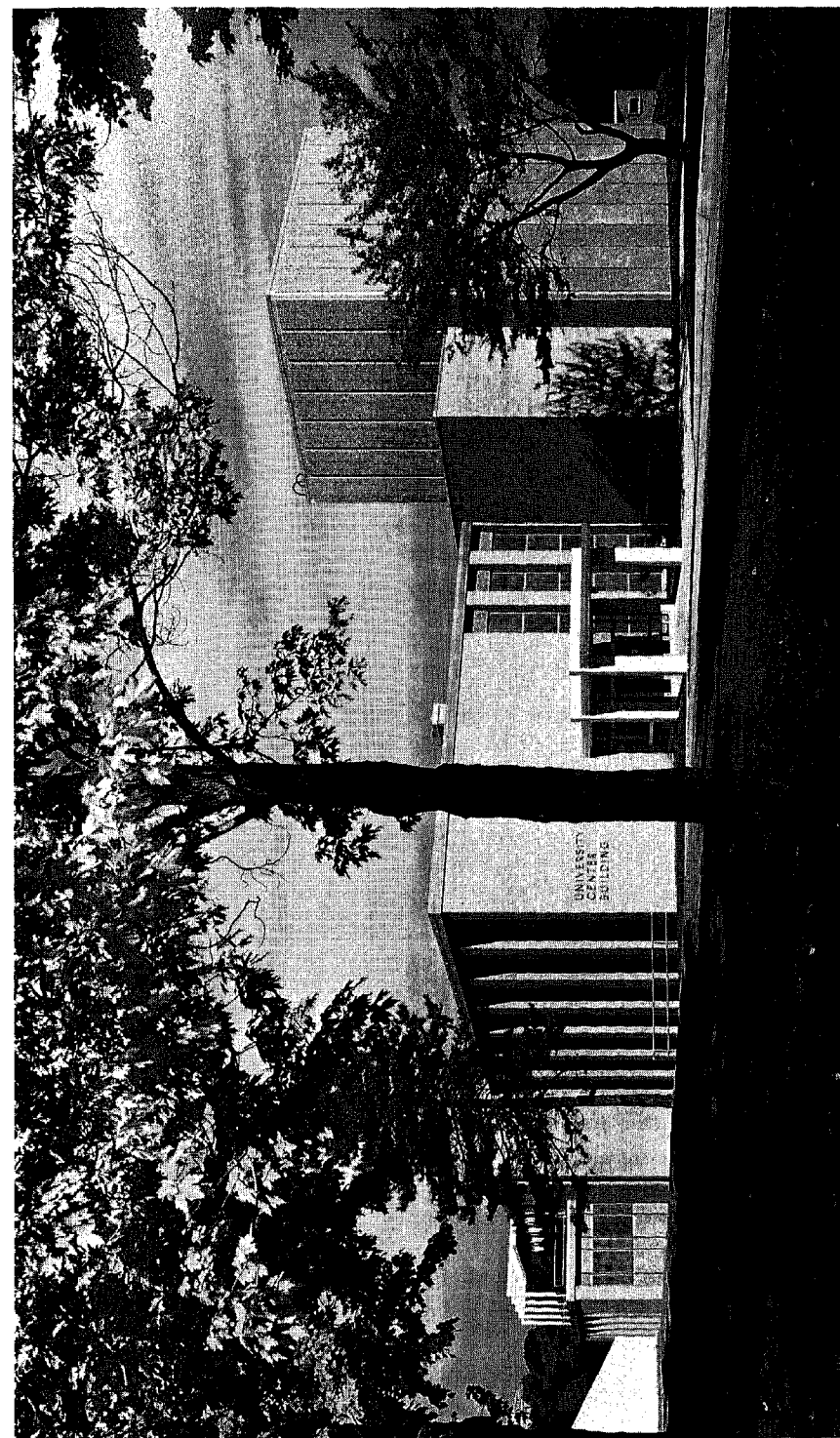
GRADUATE DIVISION

Mt 200, 201, 202, 203, 204 are offered only in the summer. The other courses are offered in a two-year cycle in the evenings during the school year.

200. TOPOLOGY. Three credit hours.
201. REAL ANALYSIS. Three credit hours.
202. THEORY OF INTEGRATION. Three credit hours.
203. COMPLEX ANALYSIS. Three credit hours.
204. MODERN ALGEBRA. Three credit hours.
- 220, 221. ADVANCED OPERATIONS RESEARCH I AND II. Three credit hours each semester. Stochastic processes, queuing theory and its applications, statistical estimation of parameters, reliability models, inventory theory, game theory, and simulation techniques. Prerequisites: Mt 124, 144.
224. DESIGN OF EXPERIMENTS. Three credit hours. Design and analysis of single-factor experiments with repeated measures on the same elements, design and analysis of factorial experiments, multifactor experiments with repeated measure on the same elements, latin squares and related designs, and analysis of covariance. Prerequisite: Mt 125.
225. APPLIED REGRESSION ANALYSIS. Three credit hours. Fitting a straight line by least squares, the matrix approach to linear regression, the examination of residuals, two independent variables, polynomials and other models, selecting the best regression equation, multiple regression, and mathematical model building. Prerequisite: Mt 224.

Mathematics

226. STOCHASTIC PROCESSES. Three credit hours. Random variables and stochastic processes, conditional probability and conditional expectation, normal processes and covariance stationary processes, counting processes and Poisson processes, renewal counting processes, and Markov Chains. Prerequisite: Mt 125.
227. STATISTICAL DECISION THEORY. Three credit hours. Games, values and optimal strategies in games, general structure of statistical games, utility and principles of choice classes of optimal strategies, sequential games, Bayes and Minimax sequential procedures, sufficient statistics and the invariance principle in statistical games. Prerequisite: Mt 226.
- 240, 241. ADVANCED OPTIMIZATION TECHNIQUES I, II. Three credit hours each semester. Theory and practice in network flows, nonlinear programming, gradient methods, direct search, branch and bound, integer programming, dynamic programming, decomposition methods, linear approximations to non-linear systems, and evaluation of algorithms. Prerequisite: Mt 140.
- 244, 245. MODERN ALGEBRA I AND II. Three credit hours each semester. Set theory, the system of natural numbers, semigroups and groups, rings, integral domains and fields, extensions of rings and fields. Elementary factorization theory, groups with operators, Jordan-Holder Theorem, modules and ideals, lattices, Abelian groups, and Galois theory. Prerequisite: Mt 144.
- 250, 251. REAL ANALYSIS I AND II. Three credit hours. Real number system, measure and integration, Banach Spaces, Hilbert Spaces. Prerequisites: Mt 144, 158, 181.
- 252, 253. FUNCTIONS OF A COMPLEX VARIABLE I AND II. Three credit hours. Number systems, complex plane, Mobius transformations, powers and roots, holomorphic functions, and infinite series. Elementary functions, complex integration, analytic continuation, Laurent expansion, meromorphic functions, and calculus of residues. Prerequisites: Mt 158, 181.
255. MEASURE THEORY AND INTEGRATION. Three credit hours. Linear spaces, additive classes and Borel sets, outer measures, Lebesgue-Stieltjes Measure, measurable functions, integration, convergence theorems, differentiation.
261. ADVANCED PARTIAL DIFFERENTIAL EQUATIONS. Three credit hours. Continuation of Mt 151. Numerical methods, existence and uniqueness, transform methods, and special functions. Prerequisites: Mt 144, 151, 159.



UNIVERSITY CENTER BUILDING

Mathematics

265. **ADVANCED ORDINARY DIFFERENTIAL EQUATIONS II.** Three credit hours. Continuation of Mt 155. LaPlace and Fourier transform theory as applied to ordinary and partial differential equations, and engineering and physics applications. Prerequisite: Mt 159.
272. **INTEGRAL EQUATIONS.** Three credit hours. Classical equations of Fredholm and Volterra; relationship to the linear differential equations initial value problem; special kernels; application to boundary value problems; and approximate methods of solution. Prerequisites: Mt 144, 155, 158.
273. **CALCULUS OF VARIATIONS.** Three credit hours. Necessary and sufficient conditions for an extremum, the Euler equations, variational problems with movable boundaries, constrained extrema, Hamilton's principle, and direct methods for solving variational problems. Prerequisites: Mt 144, 158.
277. **VECTOR AND TENSOR ANALYSIS II.** Three credit hours. Tensors in general cartesian and curvilinear coordinates, extension of integral theorems, differential geometry of surfaces, and other applications. Prerequisite: Mt 177.
280. **GENERAL TOPOLOGY I.** Three credit hours. Ordinals and Cardinals, topological spaces, connectedness, separation axioms, and covering axioms.
281. **GENERAL TOPOLOGY II.** Three credit hours. Metric spaces, convergence, compactness, function spaces, complete spaces, homotopy.
291. **SEMINAR IN ALGEBRA.** Three credit hours.
297. **SPECIAL READING FOR ADVANCED GRADUATE STUDENTS.** Credit by arrangement.
299. **MASTER'S THESIS.** Six credit hours. Required of all students following Plan A.

Military Science (MS)

The Reserve Officers' Training Corps

Staff: COL. DOOLEY, *chairman*; LT. COL. SISAK, LT. COL. COLEMAN, LT. COL. CLARK, MAJ. FUJITANI, MAJ. KOISCH, MAJ. TESSMER, CAPT. ENO, CAPT. INGRAM, CAPT. KIRWIN.

Assisted by: SGT/MAJ. BLANKENSHIP, M/SGT. REYNOLDS, SFC. ROBERSON, SFC. THOMAS, S/SGT. CAMPBELL, S/SGT. STANLEY.

Military Science

A senior unit of the Reserve Officers' Training Corps is maintained at the University by the Department of the Army.

The Department of Military Science provides an opportunity for the study of subjects of recognized military and educational value to assist the student in laying the foundations of intelligent citizenship. The primary mission is to produce junior officers who have qualities and attributes essential to their progressive and continued development as officers in the Army of the United States (United States Army Reserve), and the Regular Army.

Every student who is a physically fit citizen of the United States, between the ages of fourteen and twenty-four, is obliged to take military science during the first two years of attendance. One year of military science is required of the transfer student entering as a sophomore; none, of one entering as a junior or senior. Students entering the University at mid-year must wait until the beginning of the next academic year to begin their instruction in military science. Any student who feels that he is not physically qualified to enroll in ROTC should send a letter, written by the University physician or family doctor, to the Department of Military Science prior to registration. This letter should contain as a minimum, the student's physical limitations and the doctor's opinion as to the advisability of his participation in military training.

The Army annually provides scholarships to selected students. These scholarships provide payment of tuition fees, book costs, laboratory expenses, and \$50.00 subsistence per month. The maximum term of scholarships is four years.

Students accepted for admission to the advanced corps qualify for draft exemption.

All advanced course students attending the required six weeks summer training will be paid travel allowance to and from the training installation at the rate of six cents per mile. Pay during the training period will be \$151.95 per month.

All cadets not on scholarship but participating in the advanced program will receive retainer pay of \$50.00 per month for the period of enrollment.

All newly commissioned officers going on active duty will receive \$300.00 uniform allowance.

Individuals who are granted scholarships must enlist in the Enlisted Reserve Unit at Xavier and sign a formal contract agreeing to accept a commission if offered and to serve on active duty for four years.

Individuals completing the voluntary advanced program must complete the same agreements as scholarship students, except the active duty agreement is for only two years.

Application for exemption from basic military science can be

Military Science

made by a student if he has completed one of the following requirements:

Requirement	Exemption
1. Completion of at least 4 months of continuous military training in any service. . . .	MS 1, 2, 31, 32
2. *Military Schools	
Division:	
MST 1 and 2.	MS 1, 2
MST 1, 2, 3, 4.	MS 1, 2, 31, 32
3. *Junior Div ROTC:	
MT 1, 2, 3.	MS 1, 2
4. *NDCC Training:	
MT 1, 2, 3.	MS 1, 2

Students desiring exemption, must mail their certificates of completion to the Department of Military Science prior to registration. Students who are not citizens of the United States are not required to take ROTC but may do so if they have applied for citizenship.

The complete program of instruction comprises four sessions of lower division or basic courses and four sessions of upper division or advanced courses.

The basic courses are designed to give the student basic military and citizenship training which will benefit him and the military service if he goes into the army.

The advanced courses qualify a limited number of selected students for commissions in the United States Army Reserve and the Regular Army. Admission to MS 101 will depend upon the fulfillment of the following conditions:

1. The filing of a formal request with the Chairman of the Military Department within the dates annually announced.
2. The completion of MS 1, 2, 31 and 32. Equivalence of basic courses completed in service (for veterans) or in some other Reserve Officers' Training Corps unit will be determined by the Chairman of the Military Department, who should be informed of the training completed, preferably in writing, thirty days prior to registration.
3. The demonstration of exceptional qualities of leadership and scholarship.
4. An agreement to complete the course and to perform six summer weeks of practical work at camp after the completion

*Schools must be recognized by the Department of the Army.

Military Science

of MS 101 and 102. This work must be done under designated military supervision at a Regular Army installation.

5. Successful passing of the prescribed physical examination.
6. Attainment of a prescribed minimum score on a Department of the Army special aptitude test administered by the Department of Military Science at the University.
7. Transfer students who have not completed basic military science at their previous school, may enter the advanced course upon successful completion of the basic ROTC camp at Fort Benning, Georgia, prior to enrolling at Xavier. Admission to this camp must be coordinated by the Professor of Military Science.

Credit for ROTC will be given on the same basis as for other courses offered in the University. Where non-directed electives are required, advanced ROTC may be used to meet these requirements.

Lower Division Courses

1. **FIRST YEAR BASIC COURSE.** Two credit hours. An introduction to military science which includes organization of the Army and ROTC; instruction and practice in marksmanship; study of the role of the US Army in national security; and basic training in the school of the soldier and the exercise of command. Additional course credit is granted in academic fields as agreed between the PMS and the Dean. Two semesters.
31. **SECOND YEAR BASIC COURSE.** Four credit hours. Further instruction in the basic duties of a soldier includes instruction in American military history; instruction and application of map and aerial photograph reading; introduction to Field Artillery tactics and techniques to include its mission, organization, and capabilities, materiel, communications, section drill, and a survey of the organization and tactical employment of missiles; and continuation of training in the school of the soldier and the exercise of command. Two semesters.

Upper Division Courses

101. **FIRST YEAR ADVANCED COURSE.** Two credit hours. The theory and application of military leadership; military teaching methods to include practical application of techniques; development of leadership potential through drill and the exercise of command. Additional course credit is granted for study in academic fields as agreed between the PMS and the Dean.

Military Science

102. **FIRST YEAR ADVANCED COURSE.** Three credit hours. Introduction to Infantry tactics; small unit tactics and communications; squad combat formations with practical exercises. Instruction in counterinsurgency, and map reading. Instruction and practice in leadership laboratory continue. Attendance at a six-week summer camp at a Regular Army establishment is normally scheduled following the First Year of Advanced ROTC training. This summer camp will normally be conducted at Indiantown Gap Military Reservation, Annville, Pennsylvania (approximately 20 miles NE of Harrisburg, Pennsylvania).
103. **SECOND YEAR ADVANCED COURSE.** Three credit hours. Field Artillery tactics and techniques to include: artillery survey; duties of firing battery personnel; procedures in adjusting artillery fires both as a forward observer and in the fire direction center; operation of a Field Artillery Battery and the tactical employment of artillery. Instruction and research in the role of the United States in world affairs. Leadership training through drill is continued with all students performing officer's duties at drill. Scholarships valued at \$600 for pilot training are granted to qualifying seniors in the ROTC program who volunteer and are selected by the Chairman of the Military Department for the flight training offered by the Army ROTC at a Federal Aviation Administration (FFA) approved flying school.
104. **SECOND YEAR ADVANCED COURSE.** Two credit hours. Continuation of instruction necessary to success as a junior officer in: military law to include Courts-Martial, pre-trial investigations, and the Articles of the Uniform Code of Military Justice; orientation on the military service to include social and official customs, retirement benefits, pay scales, and a review of the military obligations incurred by ROTC graduates. Leadership laboratory is concluded with the students' serving in positions of the more senior officers. Additional course credit is granted for study in academic fields as agreed between the PMS and the Dean.

Modern Languages

Staff: DR. BOURGEOIS, *chairman*; DR. BEIGEL, DR. BURBRIDGE, MR. EBACHER, MR. EICK, MR. LEONARD, MR. RIESELMAN, DR. VEGA.

Assisted by: MRS. MOLINA, MR. PLAGEMAN, DR. ZINAM.

Students who present two or more high school units of a modern language and who pass the Proficiency Test of the Modern Language

Modern Languages

Department may complete Intermediate French, German, Russian, or Spanish in fulfillment of their modern language requirement. This test is required of all incoming freshmen.

Normally, the successful completion of the second semester of the intermediate course is a prerequisite for enrollment in upper division courses.

Students electing a major or minor in French are required to complete Fr 101, 132, and 133; those in German must take Gr 101, 132, and 133; in Spanish the required courses are Sp 101, 132, and 133. To complete the requirement in French, students entering upper division work in an odd numbered year must begin with Fr 132; those beginning in an even numbered year must start with Fr 101.

Oral-aural exercises closely related to the material covered in elementary and intermediate language classes are available on a regular schedule in the Geoghegan Memorial Language Laboratory. All students in elementary classes of German and Spanish are required to attend three 20-minute sessions per week; all intermediate language students except those in French, Scientific German, and Russian must attend two such sessions per week. The laboratory is used during class time in all oral elementary and intermediate French sections and in elementary and intermediate Russian classes.

UNDERGRADUATE DIVISION

French (Fr)

Lower Division Courses

1. **ELEMENTARY FRENCH.** Three credit hours. Designed to develop facility in reading, writing and speaking simple French.
2. **ELEMENTARY FRENCH.** Three credit hours. A continuation of Fr 1.
31. **INTERMEDIATE FRENCH.** Three credit hours. Review of grammar with special emphasis on reading; conversation. Prerequisite: Fr 2 or the equivalent.
32. **INTERMEDIATE FRENCH.** Three credit hours. A continuation of Fr 31.

Upper Division Courses

101. **ADVANCED ORAL AND WRITTEN COMPOSITION.** Three credit hours. Required of all majors and minors. This requirement is waived for students who have successfully completed Fr 198.

Modern Languages

105. **TEACHING MODERN LANGUAGES.** Three credit hours. See Ed 105.
107. **FRENCH STYLISTICS.** Three credit hours. Oral drill in advanced structural patterns, vocabulary enrichment and expansion through analysis of selected French texts. Emphasis on grammatical and syntactical difficulties. Recommended for prospective teachers and teachers-in-service.
108. **EXPLICATION DE TEXTE.** Three credit hours. An introduction to the critical analysis of French literary texts in their linguistic, stylistic and conceptual aspects, with theory of formal oral *explication* evolving from practical exercises in the language.
120. **INTRODUCTION TO FRENCH CIVILIZATION.** Three credit hours. A comprehensive examination of France, its political, economic, social, and cultural institutions, together with its geography and demography. May not be elected for credit after successful completion of Fr 198.
132. **FRENCH LITERATURE TO LOUIS XIV.** Three credit hours. Required of all majors and minors.
133. **FRENCH LITERATURE SINCE LOUIS XIV.** Three credit hours. Required of all majors and minors.
140. **MEDIEVAL FRENCH LITERATURE.** Three credit hours. Lectures and discussions of such major works of Medieval French Literature as *La Chanson de Roland*, *Le Roman de Renard*, *Les Mysteres*, *Le Roman de la Rose*. Reading in modernized French.
142. **RENAISSANCE FRENCH LITERATURE.** Three credit hours. A study of Renaissance and Reformation literature with emphasis on Rabelais, Montaigne, Calvin, Ronsard, Du Bellay.
151. **SEVENTEENTH CENTURY FRENCH CLASSICAL DRAMA.** Three credit hours. Observation, historical integration, and interpretation of representative dramas of Corneille, Moliere, and Racine.
153. **SEVENTEENTH CENTURY FRENCH THOUGHT.** Three credit hours. A survey of the century's philosophical, theological, and aesthetic ideas with emphasis on Descartes, Pascal, and Boileau.
160. **EIGHTEENTH CENTURY LITERATURE.** Three credit hours. A presentation of the philosophical and literary developments

Modern Languages

of the century, with emphasis on works by Voltaire, the Encyclopedists, Rousseau, and Marivaux.

171. NINETEENTH CENTURY FRENCH NOVEL. Three credit hours. Study of prominent prose writers within the framework of romanticism, realism, and naturalism, incorporating structural and interpretive analysis of the novel form.
173. NINETEENTH CENTURY FRENCH POETRY. Three credit hours. A study of the principal men and movements of the century, treating the poetry of romanticism, Parnassus, and symbolism.
175. BALZAC. Three credit hours. Readings and analysis of three of Balzac's masterworks. His times, life, and main philosophical and aesthetic ideas. Significance of *La Comedie Humaine*.
180. TWENTIETH CENTURY FRENCH POETRY. Three credit hours. Main trends in the poetry of the period with study and analysis of selected works by such poets as Valery, Claudel, and Saint John-Perse.
183. TWENTIETH CENTURY FRENCH NOVEL. Three credit hours. The evolution of prose fiction within this century, its main characteristics and trends, including special emphasis on the works of Proust, Gide, Mauriac, Sartre, Camus, and Robbe-Grillet.
185. TWENTIETH CENTURY FRENCH DRAMA. Three credit hours. A review and analysis of the contemporary French theater through its main themes and practices, including plays by Claudel, Giraudoux, Anouilh, Sartre, Beckett, and Cocteau.
194. SELECTED READINGS IN FRENCH. Credit by arrangement. A program created for independent readings and individual study of specific works of French literature under the supervision of a faculty member.
198. FREDIN SUMMER PROGRAM OF FRENCH STUDIES IN FRANCE. Credit by arrangement. A special memorial program for studies in French language and civilization in French institutions of learning. Prerequisite for participation in the program is Fr 31 and 32 or the equivalent. A number of partial grants-in-aid are available through the Fredin Memorial Scholarships Fund, established through the bequest of Mademoiselle Aline Fredin.

German (Gr)

UNDERGRADUATE DIVISION

Lower Division Courses

1. ELEMENTARY GERMAN. Three credit hours. Designed to develop facility in reading, writing and speaking simple German.

Modern Languages

2. ELEMENTARY GERMAN. Three credit hours. A continuation of Gr 1.
31. INTERMEDIATE GERMAN. Three credit hours. Review of grammar with special emphasis on reading; conversation. Prerequisite: Gr 2 or the equivalent.
32. INTERMEDIATE GERMAN. Three credit hours. A continuation of Gr 31.
33. SCIENTIFIC GERMAN. Three credit hours. Readings in the physical and biological sciences, but primarily in chemistry. This course is intended to prepare students for the use of German source materials in scientific work. Individual consultation and reports arranged as needed. Prerequisite: Gr 2 or the equivalent.
34. SCIENTIFIC GERMAN. Three credit hours. A continuation of Gr 33.

Upper Division Courses

101. ADVANCED ORAL AND WRITTEN COMPOSITION. Three credit hours. Required of all majors and minors.
105. TEACHING MODERN LANGUAGES. Three credit hours. See Ed 105.
110. MEDIEVAL GERMAN LITERATURE. Three credit hours. Lectures and readings in the representative works from 1100 to 1500 inclusive of Walther von der Vogelweide, Hartmann von Aue and Wolfram von Eschenbach.
120. INTRODUCTION TO GERMAN CIVILIZATION. Three credit hours. An examination of German history, politics, philosophy, literature, and art from the middle of the Eighteenth Century to the present.
130. READINGS IN GERMAN LITERATURE I. Three credit hours. Lyric and drama. An introduction to the study of German literature with readings and discussion of major works and discussion of basic literary terms.
131. READINGS IN GERMAN LITERATURE II. Three credit hours. German prose. A continuation of Gr 130.
132. GERMAN LITERATURE TO 1750. Three credit hours. A survey of German literature from the earliest time to the classical period. Lectures, discussions, and assigned readings. Required of majors.

Modern Languages

133. GERMAN LITERATURE SINCE 1752. Three credit hours. A continuation of Gr 132. Required of majors.
150. SEVENTEENTH CENTURY GERMAN LITERATURE. Three credit hours. A survey of the German language of the Seventeenth Century. The lyric, drama, and prose of the period with a major emphasis on the works of Grimmelshausen.
160. THE AGE OF GOETHE I. Three credit hours. The Classical Period (Klopstock, Lessing, Wieland, Herder, the Young Goethe, and Schiller). Lectures and assigned readings.
161. THE AGE OF GOETHE II. Three credit hours. A continuation of Goethe and Schiller. Lectures and assigned readings.
165. NINETEENTH CENTURY GERMAN LITERATURE. Three credit hours. Lectures and readings in the development of German literature from the beginning of romanticism through the rise of naturalism.
166. NINETEENTH CENTURY GERMAN LITERATURE. Three credit hours. A continuation of Gr 165.
170. THE MODERN SHORT STORY. Three credit hours. A study of the literary development of the period since 1880 and readings from representative authors including Arthur Schnitzler, Rainer, Maria Rilke, Paul Ernst, Thomas Mann and others.
171. THE MODERN DRAMA. Three credit hours. A study of the principal trends in the drama since 1880 and readings from Hauptmann, Hoffmannsthal and others.
172. MODERN POETRY. Three credit hours. A study of representative German poets from Rilke to the present time.
180. MODERN LITERATURE. Three credit hours. A study of the principal trends in German literature since 1880. Readings from Hauptmann, Nietzsche, Schnitzler, Mann, Kafka, and others.
181. MODERN LITERATURE. Three credit hours. A continuation of Gr 180.
182. THE GERMAN HORSPIEL. Three credit hours. Structure and history of the radio play. Lectures and assigned readings.

Modern Languages

194. SELECTED READINGS. Credit to be arranged. Directed reading and study for summer and special students. Course offered by arrangement with Chairman of the Department.

Russian (Ru)

UNDERGRADUATE DIVISION

Lower Division Courses

1. ELEMENTARY RUSSIAN. Three credit hours. Designed to develop facility in reading, writing and speaking simple Russian.
2. ELEMENTARY RUSSIAN. Three credit hours. A continuation of Ru 1.
31. INTERMEDIATE RUSSIAN. Three credit hours. Review of grammar with special emphasis on reading and conversation. Prerequisite: Ru 2 or the equivalent.
32. INTERMEDIATE RUSSIAN. Three credit hours. A continuation of Ru 31.

Spanish (Sp)

UNDERGRADUATE DIVISION

Lower Division Courses

1. ELEMENTARY SPANISH. Three credit hours. Designed to develop facility in reading, writing, and speaking simple Spanish. Language laboratory drill sessions.
2. ELEMENTARY SPANISH. Three credit hours. A continuation of Sp 1.
31. INTERMEDIATE SPANISH. Three credit hours. Review of grammar with emphasis in written exercise. Language laboratory drill sessions. Prerequisite: Sp 2 or the equivalent.
32. INTERMEDIATE SPANISH. Three credit hours. Designed to develop facility in reading Spanish of normal difficulty. Language laboratory drill sessions. A continuation of Sp 31.

Upper Division Courses

101. ADVANCED ORAL AND WRITTEN COMPOSITION. Three credit hours. Required of all majors and minors.
105. TEACHING MODERN LANGUAGES. Three credit hours. See Ed 105.

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120. SPANISH CIVILIZATION. Three credit hours. A summary of the essential characteristics of Spanish civilization and its contribution to the Occidental world.
124. LATIN-AMERICAN CIVILIZATION. Three credit hours. A study of the essential characteristics of the culture and civilization of Latin-America. Reading of essays by Marti, Montalvo, Rodo, and others.
132. SPANISH AUTHORS I. Three credit hours. The development of Spanish literature from the beginnings to the end of the Golden Century. Selected readings. Required of all majors and minors.
133. SPANISH AUTHORS II. Three credit hours. Spanish literature of the eighteenth, nineteenth, and twentieth centuries. A continuation of Sp 132. Required of all majors and minors.
134. LATIN-AMERICAN LITERATURE. Three credit hours. The development of Latin-American literature from the beginnings to the present time. Selected readings.
142. EPIC POETRY. Three credit hours. *Cantar del Mio Cid*, basic work of this genre, will be analyzed in the classroom. Other readings from the epic literature of Spain and Latin-America.
146. SPANISH NOVEL OF THE RENAISSANCE. Three credit hours. Main characteristics of the different kinds of novels of the period. Readings from *La Celestina*, *Lazarillo de Tormes*, and other important works.
149. SPANISH MYSTICS. Three credit hours. A study of the prose and poetry of this period with emphasis upon the works of Santa Teresa de Jesus, Fray Luis de Leon, and Juan de la Cruz.
150. THE NOVEL OF THE GOLDEN CENTURY. Three credit hours. Idealism and realism. The development of the Baroque. Selected readings.
152. CERVANTES. Three credit hours. Life and works with analytical study of *Don Quixote*.
155. THE DRAMA OF THE GOLDEN CENTURY. Three credit hours. Development and characteristics. Three plays by Lope, Tirso, and Calderon.
157. LOPE DE VEGA. Three credit hours. A study of his life and work. His lyrical poetry. Reading of representative plays.
159. CALDERON. Three credit hours. His ideas, poetry, and dramatic techniques. Reading and analysis of *La vida es sueno*. His mystery plays.

Modern Languages

171. THE PROSE OF THE NINETEENTH CENTURY. Three credit hours. Literary movements. The *costumbrista* writers. Emphasis upon Pereda and Galdos.
173. THE POETRY OF THE NINETEENTH CENTURY. Three credit hours. Foreign influences and the national tradition. Analysis of poems by Rivas, Espronceda, Becquer, Campoamor, and others.
175. THE DRAMA OF THE NINETEENTH CENTURY. Three credit hours. A study of the main dramatists. Reading and discussion of plays by Moratin, Zorrilla, Tamayo y Baus, and Echegaray. The role of Galdos.
183. THE DRAMA OF THE TWENTIETH CENTURY. Three credit hours. Main trends and developments. The art of Benavente and Lorca. The *genero chico* and the Quintero brothers.
185. "MODERNISM" AND THE GENERATION OF 1898. Three credit hours. A study of these parallel movements with emphasis upon Unamuno, Baroja, Ortega, Dario, and Nervo.
186. CONTEMPORARY LATIN-AMERICAN NOVEL. Three credit hours. A study of the development of this genre with emphasis upon Gallegos, Azuela, and Ciro Alegria.
189. PRESENT-DAY LITERARY TRENDS. Three credit hours. The course presents the various literary trends in Spain and in Latin-America from the mid-20's to the present.
194. SELECTED READINGS. Credit by arrangement. A program created for independent readings and individual study of specific works of Hispanic literature under the supervision of a faculty member.

Philosophy (Pl)

Staff: FR. SCHMIDT, chairman; MR. ALLAIRE, DR. ASHMORE, FR. CURRAN, DR. DUMONT, DR. GENDREAU, FR. HASSEL, MR. MAGNER, MR. MARRERO, FR. OPPENHEIM, MR. SCHICK, FR. TRACY, FR. WUELLNER.

Assisted by: FR. HATER, MR. MERCURIO, FR. WESSLING.

UNDERGRADUATE DIVISION

Lower Division Course

34. LOGIC. Three or four credit hours. A course in Scholastic logic; the theory and rules of logical habits. Prerequisite to all courses in philosophy; may be taken concurrently with Ps 31.

Upper Division Courses

100. **METAPHYSICS.** Three credit hours. The science of the first principles of being: the concept and modes of being; the transcendentals; theories of analogy, act and potency; the Aristotelian categories emphasizing substance and relation; the theory of efficient causality and of purpose.
105. **PHILOSOPHY OF NATURE.** Three credit hours. An historical study of the basic problems concerning metaphysics of matter; the continuum, quantity, mechanicism, space, place, motion, time and constitution of matter.
106. **NATURAL THEOLOGY.** Three credit hours. An inquiry into the question of Infinite Reality culminating in the philosophy of Infinite Being; a purely rational study of the nature and properties of Infinite Being. Prerequisite: Pl 100.
107. **PHILOSOPHY OF HUMAN KNOWLEDGE.** Three credit hours. A philosophical investigation of the problem of knowledge, of truth, of certainty, of error, and of the varieties of cognitive means with their results. Prerequisite: Pl 111.
111. **PHILOSOPHICAL PSYCHOLOGY.** Three credit hours. The unity of man; his generic and specific attributes; the origin of human knowledge; intellect, will, freedom, habits; the constitution of man; theories of the soul. (Ps 111)
131. **PRINCIPLES OF ETHICS.** Three credit hours. The science of the first principles of human goodness; the purpose of human life; the human act; morality and its essential norm; the general theory of law and rights; conscience; virtue. Prerequisite: Pl 111.
132. **PERSONAL AND SOCIAL ETHICS.** Three credit hours. A philosophical exposition of the rights and duties of the individual on the basis of ethical norms; the origin and theories of society; the social, economic and political relationships of the individual. Prerequisite: Pl 131.
133. **HISTORY OF MODERN PHILOSOPHY.** Three credit hours. A study of major philosophical systems from 1600 to contemporary times emphasizing basic philosophical positions underlying present-day thought.
135. **AMERICAN PHILOSOPHY AND CHRIST.** Three credit hours.
146. **PHILOSOPHY OF ART.** Three credit hours. An examination of the basic philosophical implications in the creation of art, with emphasis on the premises of art appreciation. Inductive

- analysis to discern the laws of progress in art; art as a kind of knowledge; the production of the art object; the beauty, morality, and meaning of the artifact.
151. **HISTORY OF ANCIENT PHILOSOPHY.** Three credit hours. Philosophical thought of Western civilization beginning with Thales and other pre-Socratics; the birth of perennial philosophical questions and their development through Plato and Aristotle to the Neo-Platonists. Offered in the fall of even numbered years.
 161. **HISTORY OF MEDIEVAL PHILOSOPHY.** Three credit hours. A survey of philosophical thought from Augustine to the close of the fourteenth century. Cultural setting for intellectual controversies of the period together with problems and solutions offered by the Masters of the Middle Ages. Offered in the spring of odd numbered years.
 170. **CURRENT PROBLEMS IN CATHOLIC PHILOSOPHY.** Three credit hours. The response of Catholic philosophers to the impetus of Existentialism, Linguistic Analysis, Phenomenology; varieties of Christian Personalism.
 176. **PHILOSOPHICAL ROOTS OF CONTEMPORARY ATHEISM.** Three credit hours.
 181. **HISTORY OF CONTEMPORARY PHILOSOPHY.** Three credit hours. A survey of European and American philosophical thought of the Modern Era.
 190. **SEMINAR: PHILOSOPHY AND SCIENCE.** Three credit hours. Open to seniors, philosophy and science majors, who are superior students and are approved prior to registration by the professor. The seminar is limited to twenty students, is offered in fall semester, and fulfills philosophy elective requirement.
 195. **SPECIAL STUDY.** Credit to be arranged.
 - 198a. **PHILOSOPHY OF SAINT THOMAS.** Five credit hours. Special studies for Honors A.B. students using Latin selections from Saint Thomas.
 - 198b. **PHILOSOPHY OF SAINT THOMAS.** Five credit hours. A continuation of Pl 198a.
 - 199a. **SENIOR COMPREHENSIVE REVIEW.** One credit hour. Required of all seniors majoring in philosophy.
 - 199b. **SENIOR COMPREHENSIVE REVIEW.** One credit hour. Required of all seniors majoring in philosophy.

GRADUATE DIVISION

The Master's program aims at a high development of penetration into the Thomistic principles of philosophy; a knowledge of the major philosophical positions developed in Western civilization; an analytic mentality capable of formulating a problem and finding its solution; a critical approach to the thought of other philosophers; a strong degree of the habit of philosophy itself.

The minimum requirements for a Master of Philosophy degree are:

1. Completion of twenty-four semester hours of course work inclusive of PI 151 or 161, 206, 210, 254, 265, or their equivalents.
2. Master's thesis, PI 299, six semester hours.
3. Comprehensive examination on course work and thesis.

Graduate Courses

206. THOMISTIC THEORY OF KNOWLEDGE. Three credit hours.
210. THOMISTIC METAPHYSICS. Three credit hours.
228. PHILOSOPHICAL PROBLEMS IN MODERN SCIENCE. Three credit hours.
241. RECENT ETHICAL THEORIES. Three credit hours.
245. PHILOSOPHY OF AESTHETICS. Three credit hours.
252. PLATO: MAJOR DIALOGUES. Three credit hours.
254. ARISTOTLE. Three credit hours.
261. AUGUSTINE OF HIPPO. Three credit hours.
263. PHILOSOPHY OF SAINT BONAVENTURE. Three credit hours.
264. THOMAS AQUINAS: INTRODUCTION TO THE TEXT. Three credit hours.
265. THOMAS AQUINAS: ON BEING AND ESSENCE. Three credit hours.
276. EXISTENTIALIST AND LINGUISTIC ANALYSIS. Three credit hours.
287. AMERICAN PRAGMATISTS. Three credit hours.
298. SPECIAL STUDY. Credit to be arranged.
299. MASTER'S THESIS. Six credit hours.

Physics (Ph)

Staff: MR. HART, *chairman (on leave)*; DR. MILLER, *acting chairman*; FR. BRADLEY, MR. MARCACCIO, MR. TOEPKER, FR. VOLLMAYER, DR. WERNER.

Assisted by: MR. FISCHER, *manager of physics*; DR. BAHR, DR. LAMBERT.

UNDERGRADUATE PHYSICS

Lower Division Courses

3. COLLEGE PHYSICS. Four credit hours each semester. This is a terminal course covering mechanics, heat, sound, electricity, magnetism, and optics. Three lectures and one laboratory session per week. Prerequisite: Algebra and Trigonometry.
4. GENERAL PHYSICS. Four credit hours each semester. A general physics course for majors in mathematics and chemistry. Mechanics, heat, sound, electromagnetism, optics, and modern physics. Three lectures and one laboratory session per week. A knowledge of basic differential and integral calculus is required.
9. UNIVERSITY PHYSICS I, II. Three or four credit hours each semester. This is a general physics course for science majors: it covers mechanics, heat, sound, electromagnetism, optics, and modern physics. Three lecture sessions and one laboratory session per week. Calculus should be taken concurrently in the first semester.
11. ADVANCED TOPICS IN GENERAL PHYSICS. Two credit hours of lecture and two of laboratory. Direct-current circuit problems; transient and steady state solutions for some RLC circuits; series and parallel resonance; Kirchhoff's Laws in complex form; alternating current networks. Complex-number vector methods and matrices are used.
12. ELECTRONICS. Two credit hours of lecture and two of laboratory. Basic electronic circuits including power supplies, amplifiers, oscillators, and switching circuits using both vacuum tubes and transistors. Impedance relations and electronic filters. Theory of electronic measurements.

Upper Division Courses

101. MECHANICS LABORATORY. Two credit hours. This lab is designed to introduce the student to the more advanced counterparts of the University physics laboratory. Analog

Physics

and digital computer techniques are studied. Also experiments on ellipsoids of inertia, Kater's pendulum, gyroscopic precession and nutation, and forced harmonic oscillations.

102. OPTICS LABORATORY. Two credit hours. This laboratory is devoted to experiments in Physical Optics, including diffraction, Michelson's interferometer, multiple beam interference, polarization, measurement of the speed of light, and various experiments on the prism spectrograph.
103. ATOMIC PHYSICS LABORATORY. One credit hour. Basic experiments are performed on Compton effect, photoelectric effect, atomic spectra, high vacuum techniques, and mass spectrometry.
104. NUCLEAR PHYSICS LABORATORY. One credit hour. Experiments in radioisotope techniques and instrumentation. Mossbauer effect and neutron diffusion are stressed.
111. THEORETICAL MECHANICS I. Three credit hours. Calculus of vectors, conservative forces, nonlinear oscillator, forced oscillations with damping, electrical and acoustical analogues, planetary motion and the general laws of alpha-particle scattering, conservation of linear and angular momentum, coupled oscillators, and normal coordinates. Prerequisite: Mt 107.
112. THEORETICAL MECHANICS II. Three credit hours. Rigid body motion, moments of inertia, principal axes, Euler's equations, rotation about fixed axis, energy equation, Lagrange's equations, Hamilton's equations, principle of least action. Prerequisite: Mt 109.
121. THERMODYNAMICS. Three credit hours. Thermodynamic variables and processes, internal energy of a system, first and second laws of thermodynamics, Carnot cycle, entropy and irreversibility, Gibbs's functions and Maxwell's relations, Clausius-Clapeyron and Gibbs-Helmholtz equations, van der Waals gas, phase rule, Boltzmann's distribution law, Maxwell's distribution law, Bose-Einstein statistics, Fermi-Dirac statistics. Prerequisite: Mt 109.
131. ACOUSTICS. Three credit hours. Forced oscillations with damping, acoustical-electrical-mechanical analogies, wave motion in three dimensions, interference patterns, acoustic impedance, diffraction effects. Prerequisite: Mt 109.
141. ELECTROMAGNETISM I. Three credit hours. Coulomb's law, Ampere's law, Faraday's law, Maxwell's electromagnetic

Physics

equations in free space and material media. Course is given in vector notation. Corequisite: Ph 111.

142. PHYSICAL OPTICS. Three credit hours. Electromagnetic wave theory is used to derive the laws of optics; reflection, refraction, diffraction, Fresnel integrals, and theory of dispersion. Prerequisites: Mt 109, Ph 141.
143. ELECTROMAGNETISM II. Three credit hours. A continuation of Electromagnetism I, including application of Maxwell's equations, magnetic and scalar vector potential. Prerequisites: Mt 110, Ph 142.

The following courses (150-159) are intended for teachers or prospective teachers who wish to obtain a concentration in physics. Courses may be taken in any order. The only prerequisite is Ph 5, 6: General Physics.

150. INTRODUCTION TO ELECTRONICS. Two or three credit hours. Introductory electronics covering the basic ideas of amplifiers, oscillators, switching circuits, power supplies, measuring instruments, etc.
- 151, 152. ELECTRONICS FOR SCIENTISTS. Two credit hours for lecture, one credit hour for laboratory, each semester. This course is intended for the scientist or prospective scientist who needs a working knowledge of electronics. The course includes analysis and design of power supplies, amplifiers, oscillators, switching circuits, and filters.
154. ELEMENTARY CLASSICAL MECHANICS. Three credit hours. A study of mechanics beyond that normally covered in General Physics. Topics include vector resolution, Newton's first and second law, impulse and momentum, angular momentum, and harmonic motion.
155. ELEMENTARY OPTICS. Three credit hours. Geometrical and physical optics with emphasis on the latter. Reflection and refraction, lenses, polarization, interference, diffraction, and line spectra.
156. ELEMENTARY ELECTRICITY AND MAGNETISM. Three credit hours. Electric fields, potential, dielectrics, capacitance, magnetic field, induced EMF, inductance, and ferromagnetism.
157. PHYSICS OF THE ATOM. Three credit hours. The principles of modern physics for people whose profession is other than that of a research physicist. Topics include relativity, quantum mechanics, and atomic and nuclear physics as well

as the relations between these topics and modern philosophy. Since the course is as rigorous as ordinary language will allow, even the physics student can expect to benefit by obtaining a more profound respect for the conciseness of mathematical equations.

158. **ELEMENTARY ASTRONOMY.** Three credit hours. A non-mathematical treatment of astronomy, including basic theories of astronomy, the telescope, the solar system, stars, galaxies, and theories of cosmology.
164. **ATOMIC PHYSICS.** Three credit hours. The atomic view of matter, electricity, and radiation; the atomic models of Rutherford and Bohr, relativity, X-rays, and introduction to quantum mechanics.
165. **NUCLEAR PHYSICS AND FUNDAMENTAL PARTICLES.** Three credit hours. Natural and artificial radioactivity, nuclear reactions, high-energy physics, and fundamental particles. Prerequisite: Ph 164.
166. **INTRODUCTION TO QUANTUM MECHANICS.** Three credit hours. The mathematical formalism of quantum mechanics and its physical interpretation. Wave mechanical concepts, eigenfunctions and eigenvalues, Schrodinger's equation, the hydrogen atom, matrix mechanics, perturbation theory, and collision processes. Prerequisite: Ph 164.
172. **ANALOG COMPUTER WORKSHOP IN PHYSICS.** Three credit hours. This course is an innovation of a unique teaching machine—the analog computer. A survey of differential calculus, integral calculus, and some elementary differential equations will be presented as they apply to certain problems in physics. A review of electrical circuits on the level of a general physics course will be given as the background for understanding the analog computer. Thereafter, all students will be given the opportunity to study various properties of functions by programming them on the computer.
- 174, 175. **ADVANCED STUDY OF BASIC PHYSICS I, II.** Three credit hours each semester. This course gives the student an opportunity to understand the broad implications of the fundamental principles of general physics. Emphasis is placed on the proper pedagogical exposition of basic principles as they should be related to beginning students; hence this course should benefit current and prospective high school teachers. Prerequisite: General Physics or the equivalent.
- 176, 177. **ADVANCED STUDY OF INTERMEDIATE PHYSICS I, II.** Three credit hours each semester. This course extends the approach

used in Ph 174, 175 to the intermediate subjects of mechanics, thermodynamics, electromagnetism, and optics. Prerequisite: General Physics.

180. **(GEOPHYSICS.) ELEMENTARY SEISMOLOGY.** Three credit hours. This course treats the nature of earthquakes, fundamental seismograph theory, and the location of earthquakes, and introduces the student to some of the basic concepts of elastic wave theory. Prerequisites: Ph 12, Mt 61.
186. **ASTRONOMY.** Three credit hours. Planetary structure and motion, the solar system, stars and galaxies, radiation and spectra, and cosmology. Prerequisite: Ph 164.
197. **SPECIAL READING AND STUDY FOR ADVANCED STUDENTS.** Credits to be arranged.
199. **SENIOR COMPREHENSIVE REVIEW.** Two credit hours.

GRADUATE DIVISION

Principal Courses. Required of all students.

210. **CLASSICAL ANALYTICAL MECHANICS.** Three credit hours. Mechanical principles and mathematical methods useful in relativity theory and quantum mechanics. The variational principle, rigid body motion, elasticity, Hamilton's equations and canonical transformations, Hamilton-Jacobi theory, and an introduction to relativistic mechanics.
- 220, 221. **RELATIVISTIC ELECTRODYNAMICS.** Three credit hours each semester. Relativistic Electrodynamics as an example of a theory. The nature of a theory, general principles underlying both Newtonian mechanics and special theory of relativity. The assumption of superposition, the full theory of Electrodynamics, and the Maxwell-Lorentz equations. Difficulties resulting from the fact of existence of electrons.
- 230, 231. **QUANTUM MECHANICS.** Three credit hours each semester. Some fundamental experiments of atomic physics, De Broglie waves and properties of wave packets. Uncertainty relation. Schrodinger's equation applied to the hydrogen atom and the harmonic oscillator. Quantum Mechanical operators in Hilbert space, matrix formulation of Q.M., perturbation theory, theory of measuring process, angular momentum and spin, Dirac's electron.

Other Courses:

200. **SEMINAR: STUDENT PRESENTATIONS.** Credit assigned.
201. **GRADUATE EXPERIMENTAL PHYSICS.** One to four credit hours.

Physics

211. CLASSICAL ANALYTICAL MECHANICS II. Three credit hours. Second semester of Ph 210. Offered occasionally.
- 232, 233. ADVANCED QUANTUM THEORY. Three credit hours each semester. Bohr's minimal correspondence interpretation of the quantum formalism is critically examined in the light of recent work by Y. Aharonov, with emphasis on questions of measurement.
240. SEMINAR: QUANTUM BEHAVIOR OF SYSTEMS. Three credit hours. Classical concepts demanded by the quantum theory as a rational generalization of classical physics. A contemporary approach to the quantum, based upon recent experiments such as the ESAB effect, optical pumping, and superconductivity. Subtleties of quantum wholeness, such as the Einstein-Podolsky-Rosen effect, explained through quantum behavior in the configuration space of a system. Quantum implications for the theory of knowledge, with particular emphasis on Bohr's account of his discussions with Einstein.
242. SEMINAR: PHYSICAL INTERACTION. Three credit hours. A sequel to Quantum Behavior of Systems. A further exploration into the extensive emendations of Newtonian mechanics involved in relativistic electrodynamics and quantum mechanics. The central role of interaction in questions of measurement, separability, wholeness, and extension of behavior. Reports and discussions of current investigation by the instructor and some of the students into nuclear, electromagnetic, Fermi, and gravitational interactions.
244. SEMINAR: CONSTANTS OF NATURE. Three credit hours.
246. SEMINAR: OUTSTANDING PROBLEMS IN PHYSICS. Three credit hours.
248. SEMINAR: THEORY OF ACTIVE OBSERVATION. Three credit hours.
- 270, 271. INTRODUCTORY SOLID STATE PHYSICS. Three credit hours each semester. Crystal structure and its measurement by X-ray techniques; crystal binding, elastic constants of crystals, thermal and dielectric properties, band structure, and applications to semi-conductors. Specific examples from recent literature will be discussed as time permits.
280. SPECIAL TOPICS: (TOPIC TO BE SPECIFIED). Three credit hours. From time to time special topics will be offered as Ph 280. These include Statistical Mechanics, Electronics, Nuclear Physics, Solid State Theory, Fluid Dynamics, Plasma Physics, Gravitation and General Relativity, and Applied Mathematical Physics.

Physics

- 284, 285. METHODS OF MATHEMATICAL PHYSICS. Three credit hours each semester. This course includes matrix and vector algebra, complex variables, integral transforms, and lineal and partial differential equations. In all cases emphasis is placed on the physical application of the theory.
295. INDEPENDENT STUDY. Credit by arrangement. A limited number of advanced students may undertake interdisciplinary graduate study and research. The breadth of this work may call for the student to attend, from time to time and with faculty permission, classes given in various departments. This course provides explicitly for such attendance, and in regularly scheduled conferences with a faculty advisor the student reports in detail on these classes.
297. SPECIAL READINGS: AREA TO BE SPECIFIED. One to three credit hours.
298. RESEARCH IN: AREA TO BE SPECIFIED. One to three credit hours.
299. MASTER'S THESIS. Six credit hours.

Supporting Courses:

The student, with his advisor's specific approval, may elect supporting courses in other departments such as Mathematics, Chemistry, and Biology.

Psychology (Ps)

Staff: DR. BIELIAUSKAS, *chairman*; DR. CERBUS, DR. CLARKE, DR. FEUSS, FR. FOLEY, DR. HELLKAMP, DR. KAPLAN, DR. KRONENBERGER, MR. LAGRANGE, DR. LIPPERT, DR. MCCRYSTAL, DR. QUATMAN, DR. SCHMIDT, DR. STEVENSON, FR. TRAINOR.

Assisted by: DR. COHEN, MR. DINERMAN, MR. FARRAR, DR. FRANKEL, FR. KELLY, MR. MILLER, SR. JOHN BOSCO RYAN, MR. SETA.

Graduate Assistants: MR. BLASE, MR. EILERMAN, MR. HARTMAN, MISS KATHMANN, MRS. PERLMUTTER, FR. SABATAITIS, MR. SUTER.

UNDERGRADUATE DIVISION

Lower Division Courses

31. GENERAL PSYCHOLOGY. Three credit hours. A study of facts and principles concerning human behavior. This course attempts to acquaint the student with the understanding

of basic psychological processes such as sensation, perception, motivation, learning, psychological measurements, and personality development. Offered to sophomores majoring in various departments including the Department of Psychology.

32. **ADVANCED GENERAL PSYCHOLOGY.** Three credit hours. A course specially designed for psychology majors, minors, and those interested in taking more advanced courses in psychology. Special attention given to the scientific methodology in psychology and its application to experimental studies in the areas of perception, motivation, thinking, memory, learning, and individual differences. Prerequisite: Ps 31.
41. **EDUCATIONAL PSYCHOLOGY.** Three credit hours. Psychological principles applied to learning and teaching. Prerequisite: Ps 31. (Ed 41)

Upper Division Courses

101. **EXPERIMENTAL PSYCHOLOGY I.** Three credit hours. Introduction to experimental methods in psychology; key statistical techniques, journal reading, and report writing. Experiments deal with visual processes, learning, transfer, problem solving, association, and attention. One hour lecture and four hours' laboratory per week. Prerequisites: Ps 31, Ps 32, and the instructor's approval.
102. **EXPERIMENTAL PSYCHOLOGY II.** Three credit hours. Directed experiments on animal and human subjects, emphasizing planning, instrumentation, controls, and logical analysis of results. One hour lecture period and four hours' laboratory periods per week. Prerequisite: Ps 101 and the instructor's approval.
103. **EXPERIMENTAL PSYCHOLOGY.** Five credit hours. Similar to Ps 101. Summers only.
110. **DEVELOPMENTAL PSYCHOLOGY.** Three credit hours. A study of those factors which significantly influence the life span of man from childhood to old age, with application to the stages of physiological maturation, developmental tasks, social learning, and personality integration. (Ed 110)
111. **PHILOSOPHICAL PSYCHOLOGY.** Three credit hours. The specific attributes of man; origin of human knowledge; intellect, will, freedom, habits; the constitution of man; theories of the soul; the unity of man; person. (Pl 111.) Prerequisites: Pl 34, Ps 31.

118. **INTRODUCTION TO THE EMOTIONALLY DISTURBED CHILD.** Two credit hours. (Ed 118)
119. **GUIDING THE EMOTIONALLY DISTURBED CHILD.** Two credit hours. (Ed 119)
120. **EDUCATING THE DISTURBED CHILD.** Two credit hours. (Ed 120)
121. **THE BIOLOGICAL BASIS OF ANIMAL BEHAVIOR.** Four credit hours. A comparative study of the physiology and morphology of the nervous system and sensory receptors, with special emphasis on the adaptation of animal life to environmental changes. Two lectures and four hours of laboratory. Prerequisites: Bl 1 and 2, or Bl 3 and 4. (Bl 121)
123. **SOCIAL DYNAMICS OF COMMUNICATION.** Three credit hours. The roll and meaning of communication in human relations. The effects of attitudes, belief systems and prejudices on both verbal and non-verbal interactions between people and among groups. The course includes a combination of theoretical considerations and practical demonstrations. (CA 123)
128. **INDUSTRIAL PSYCHOLOGY.** Two or three credit hours. A review of the principles of sound psychological procedure as applied to personnel in commerce and industry. Concentration upon the human element in American industry. Lectures by plant and industrial psychologist. (IR 128)
131. **PSYCHOLOGICAL AND ACHIEVEMENT TESTS.** Two or three credit hours. Commonly used group tests; testing procedures, and rationale underlying tests of intelligence, aptitude, achievement, interest, and personality. Selecting and evaluating specific group tests in these areas. (Ed 131)
134. **CHILD PSYCHOLOGY.** Two credit hours. The genetic study of growth and development; hereditary and environmental factors; early and later childhood to puberty. (Ed 134)
135. **ADOLESCENT PSYCHOLOGY.** Two credit hours. Interrelated physical, physiological, and mental changes associated with adolescence. (Ed 135)
136. **ABNORMAL PSYCHOLOGY.** Two or three credit hours. Dynamics of a disturbed personality; symptoms, causes, and treatment of psychoneuroses, psychoses, and deviant personalities. Theoretical descriptions are illustrated through visual aids and field trips. (Ed 136)
138. **STATISTICAL TECHNIQUES.** Two or three credit hours. A study of basic statistics used in psychology and education, includ-

- ing sampling techniques, measures of central tendency, variability, and simple correlation. Two lectures and two laboratory periods per week. (Ed 138)
142. **MENTAL HYGIENE.** Two credit hours. A study of the progressive stages of development in emotional growth. Factors of adjustment and maladjustment in education, social relations, and occupations. (Ed 142)
151. **HISTORY AND SYSTEMS OF PSYCHOLOGY.** Two or three credit hours. A study of modern scientific psychology including its various schools and their backgrounds. Reading in a broad field of psychological theory required. (Ed 151)
153. **PHYSIOLOGICAL PSYCHOLOGY.** Three credit hours. Neuro-anatomy and neurophysiology of the central nervous system including sensory and motor processes. The autonomic systems, their function and their relation to emotion. Activation levels and the neuro-hormonal bases of motivation. Neural basis of conditioning and higher forms of learning. Brain disorders and their causes and treatment.
155. **DYNAMIC PSYCHOLOGY.** Two credit hours. Critical appreciation of personality concepts and methodology of various psychotherapeutic schools. While special attention is given to Freud's contribution, other schools considered are Adlerian, Jungian, Rankian, Existential Therapy, and Client-Centered Therapy. (Ed 155)
156. **PSYCHOLOGY OF DELINQUENCY.** Two credit hours. A treatment of the types and causes of juvenile delinquency together with brief case histories. (Ed 156)
158. **SOCIAL PSYCHOLOGY.** Two credit hours. A study of the individual's personality, attitudes, and behavior in multi-individual situations. (Ed 158)
170. **DIFFERENTIAL PSYCHOLOGY.** Two credit hours. The existence, extent, and significance of individual differences in human traits. The role of heredity and environment in producing individual differences. Psychological analysis of sex, racial, national, and other group differences. (Ed 170)
177. **THEORIES OF PERSONALITY I.** Two credit hours. Meaning and application of different concepts in description of personality dynamics. Emotions, their expressions, their mutual inter-relationships and their meaning. Sources of personality development. Current personality theories and their evaluation. (Ed 177)
178. **THEORIES OF PERSONALITY II.** Two credit hours. A continuation of Ps 177. (Ed 178)

180. **INTRODUCTION TO PROJECTIVE TECHNIQUES.** Two or three credit hours. Theory and rationale of projective techniques. Introduction to the Rorschach technique, Thematic Apperception Test, Szondi Test, visual-motor tests, drawing techniques, and word association tests. Tests are described, and clinical illustrations are presented with case histories.
186. **PSYCHOLOGY PRACTICUM.** Three credit hours. Practical experience in administering of group tests; scoring and interpretation. Prerequisite: Ps 181 and the instructor's approval.
195. **READINGS IN PSYCHOLOGY.** Either semester: one, two, or three credit hours. The student undertakes a library research project which he performs with the assistance and under supervision of one staff member. He is to write a paper and pass an oral examination at the end of the semester. For seniors and graduate students only.
199. **SENIOR COMPREHENSIVE REVIEW.** Two credit hours. Required of all majors in their senior year. An original research project may be substituted for this requirement upon approval of the Chairman of the Department. Prerequisite: Senior standing and instructor's approval.

GRADUATE DIVISION

The Department of Psychology of the Graduate School offers a program leading toward the Master of Arts in Psychology. This program aims to prepare students for continuing their graduate studies at the doctoral level and for employment in clinical, counseling, and industrial psychology. To insure a broad advanced knowledge of psychology, all students must take the core curriculum. They are then allowed to select their area of specialization.

Core Curriculum Courses

177. **THEORIES OF PERSONALITY I AND II.** Two credit hours. See 178. course description on preceding page.
201. **CONTEMPORARY THEORIES IN PSYCHOLOGY.** Three credit hours. An evaluative review of the concepts which are basic to current theory, research, and practice in psychology and its major divisions.
202. **ADVANCED EXPERIMENTAL PSYCHOLOGY.** Three credit hours. Intensive survey of experimental procedures and findings; utilization of laboratory equipment; introduction to individual laboratory research.

Psychology

214. **ADVANCED STATISTICS.** Three credit hours. Review of elementary correlation. Serial correlation and other correlation methods. Use of multiple regression and discriminant analysis with psychological data. Simple analysis of variance. Basic statistical considerations in dealing with small samples. Prerequisite: Ps 138 or equivalent.
249. **SEMINAR: PHILOSOPHICAL ISSUES IN PSYCHOLOGY.** Three credit hours. A study of the historical development of basic psychological concepts from Aristotle to the present. Interrelations between science, psychology, and philosophy.
283. **PROFESSIONAL PROBLEMS IN PSYCHOLOGY.** One credit hour. Basic principles of ethics and their application to psychological theory, research, and practice. Case studies.

Open to Graduate Students Only

203. **EDUCATIONAL PSYCHOLOGY.** Three credit hours. (Ed 203)
204. **DEVELOPMENTAL PSYCHOLOGY.** Three credit hours. (Ed 204)
209. **PSYCHOPATHOLOGY.** Two credit hours. (Ed 209)
210. **LEARNING AND MOTIVATION.** Two or three credit hours. (Ed 210)
220. **CLINICAL STUDIES; THE EMOTIONALLY DISTURBED CHILD.** Two credit hours. (Ed 220)
232. **VOCATIONAL AND EDUCATIONAL GUIDANCE.** Two credit hours. (Ed 232)
233. **COUNSELING PRINCIPLES AND TECHNIQUES.** Two credit hours. (Ed 233)
235. **OCCUPATIONAL INFORMATION AND JOB ANALYSIS.** Two credit hours. (Ed 235)
237. **INDIVIDUAL TESTS OF INTELLIGENCE.** Two to four credit hours. (Ed 237)
241. **DESIGN OF EXPERIMENTS.** Three credit hours.
242. **MARKETING RESEARCH.** Three credit hours. (BA 242)
- 245-6. **PROJECTIVE TECHNIQUES I AND II.** Six credit hours.
251. **SEMINAR: SPECIAL TOPICS.** Three credit hours.
252. **MONTESSEORI EDUCATION: PSYCHOLOGICAL BASES.** Three credit hours. (Ed 252)
253. **MONTESSEORI EDUCATION: HISTORICAL, THEORETICAL AND DEVELOPMENTAL ASPECTS.** Three credit hours. (Ed 253)

Psychology

258. **COMMUNICATION.** Three credit hours.
261. **PERSONNEL SELECTION AND EVALUATION TECHNIQUES.** Three credit hours.
265. **COUNSELLING AND PSYCHOTHERAPY.** Three credit hours.
270. **PSYCHOLOGY OF READING.** Two credit hours. (Ed 270)
280. **REMEDIAL READING.** Two or three credit hours. (Ed 280)
281. **PRACTICUM IN REMEDIAL READING.** Two to four credit hours. (Ed 281)
282. **PRACTICUM.** Three to six credit hours.
284. **ROLE AND FUNCTION OF SCHOOL PSYCHOLOGIST.** Two credit hours.
- 285-8. **WORKSHOPS AND INSTITUTES.** Titles to be announced. One, two, or three credit hours.
- 297-8. **RESEARCH IN PSYCHOLOGY.** Titles to be specified. Three credit hours.
290. **INTERNSHIP IN SCHOOL PSYCHOLOGY.** Three credit hours each semester.
299. **MASTER'S THESIS.** Six credit hours.

Courses Open to Graduate and Advanced Undergraduate Students (For course descriptions see preceding pages.)

121. **BIOLOGICAL BASIS OF ANIMAL BEHAVIOR.** Four credit hours. (BI 121)
128. **INDUSTRIAL PSYCHOLOGY.** Two or three credit hours. (IR 128)
131. **PSYCHOLOGICAL AND ACHIEVEMENT TESTS.** Three credit hours. (Ed 131)
134. **CHILD PSYCHOLOGY.** Two credit hours. (Ed 134)
135. **ADOLESCENT PSYCHOLOGY.** Two credit hours. (Ed 135)
136. **ABNORMAL PSYCHOLOGY.** Two or three credit hours. (Ed 136)
138. **STATISTICAL TECHNIQUES.** Two or three credit hours. (Ed 138)
151. **HISTORY AND SYSTEMS OF PSYCHOLOGY.** Three credit hours. (Ed 151)
155. **DYNAMIC PSYCHOLOGY.** Two credit hours. (Ed 155)
156. **PSYCHOLOGY OF DELINQUENCY.** Two credit hours. (Ed 156)

Psychology

- 158. SOCIAL PSYCHOLOGY. Two credit hours. (Ed 158)
- 170. DIFFERENTIAL PSYCHOLOGY. Two credit hours. (Ed 170)
- 177-8. THEORIES OF PERSONALITY I AND II. Four credit hours, two each semester. (Ed 177-8)

Sociology (So)

Staff: FR. McEVOY, MISS DWYER, MR. NIEHAUS, MR. RUNDLE.

The Department of Sociology is administered by the Dean of the College of Arts and Sciences.

Lower Division Courses

- 31. INTRODUCTION TO SOCIOLOGY. Three credit hours. A course in the foundational postulates of a science of society; evolution of social theory; psychological, ecological and cultural approaches to a study of man and social institutions; problems of race and population; sociological features and functions of the family; sociology of the state.
- 36. SOCIAL HYGIENE. Two credit hours.

Upper Division Courses

- 103. PROBLEMS OF LABOR. Two or three credit hours. (IR 122)
- 109. POLITICAL THOUGHT. Three credit hours. (Po 131)
- 110. POLITICAL THOUGHT. Three credit hours. (Po 132)
- 111. SOCIAL CASE WORK. Two or three credit hours. (Ed 111)
- 125. MARRIAGE. Two credit hours. Origin and history of marriage as a natural institution; Christian marriage; practical and intelligent approach to marriage; marriage regulation by church and state; marriage today and tomorrow.
- 126. THE FAMILY. Two credit hours. Origin and history of the family; the family in other cultures as compared with the Christian family; the family in the United States and in Latin America; the rich family life, happiest human group or institution; the family as a functional unit, as the best educational channel to democratic citizenship, and as the basis for sound society.
- 132. PERSONAL AND SOCIAL ETHICS. Three credit hours. (Pl 132)
- 140. MODERN URBAN SOCIETY. Three credit hours.

Sociology

- 155. SOCIAL CLASSES IN THE UNITED STATES. Three credit hours.
- 157. RACIAL-CULTURAL TENSIONS AND THE COMMUNITY. Three credit hours.
- 158. SOCIAL PSYCHOLOGY. Two credit hours. (Ps 158, Ed 158)
- 161. SOCIETY AND RACE. Three credit hours.
- 170. CATHOLIC THOUGHT ON CONTEMPORARY SOCIAL PROBLEMS. Three credit hours. Secularized education and its social consequences. Communism, racism, industrial unrest, and population optimum, both quantitative and qualitative.
- 180. CULTURAL ANTHROPOLOGY. Three credit hours.
- 190. DEVIANT BEHAVIOR AND CRIMINOLOGY. Three credit hours.
- 195. REBUILDING THE SOCIAL ORDER. Two credit hours. Rebuilding the social order; the Catholic social movement; the Papal social program; ineffective remedies; state and social reconstruction; practical programs of action. (Po 195)

Theology (Th)

Staff: FR. BRUEGGEMAN, *chairman*; FR. BASTIAN, FR. CARTER, FR. FISCHER, FR. McEVOY, FR. E. O'CONNOR, FR. SCHWIND, SR. JANE STIER, FR. TREACY, FR. WHEELER.

Assisted by: RABBI GOLDMAN, DR. HARKINS, FR. MOELL, FR. PETROVICH.

The four courses required of Catholic students (Th 40, 41, 42, 43) comprise what is known as the LeMoyné plan of college Theology. The characteristics of this plan are that it is Scriptural and Christological. The principle which gives unity to the courses is the truth that the essence of the "good news" of the Gospel is the new life which we have in God through Christ. Each particular theological truth will be studied in relation to this central fact.

In keeping with the religious purpose of the University, non-Catholic students are required to take Th 3 and 5. The content of these courses meets the need for religious instruction without the elements of controversy.

UNDERGRADUATE DIVISION

Lower Division Courses

- 3. FOUNDATIONS OF NATURAL RELIGION. Two credit hours. An approach to religion in the light of reason. A survey of the history of religion emphasizing the principles of certitude,

Theology

the existence of God, the nature of man, the necessity of religion, and moral responsibility. *Required of non-Catholic students.*

5. THE DESTINY OF MAN. Two credit hours. A study of man's free will, his immortal soul, and his consequent destiny, his happiness or punishment in the future life as these can be known in the light of reason. *Required of non-Catholic students.*
40. CHRIST IN THE GOSPELS. Two credit hours. A study of the individual histories of the life of Christ in the four Gospels: their background, interpretation, credibility, and inspiration. The life of Christ is then studied as an organic whole, with special emphasis on Christ as Prophet, revealing Himself as the Divine Messiah, and as King, endowed with Divine authority and power, which He communicated to His Church. *Required of Catholic students.*
41. CHRIST, OUR REDEEMER. Two credit hours. The priesthood and sacrifice of Christ, studied in the Passion and the Holy Sacrifice of the Mass. A doctrinal study of the redemption and the resurrection of humanity in Christ, its Head, out of the death of sin into which Adam's disobedience had plunged it. *Required of Catholic students.*
42. CHRIST IN HIS CHURCH. Two credit hours. A study of the Mystical Body of Christ, His Church, as seen in the Acts of the Apostles and in the Epistles of St. Paul: considering both the external and internal life of the Church, dogmatic development as well as the hierarchical structure of the Church. *Required of Catholic students.*
43. CHRIST IN THE CHRISTIAN SOUL. Two credit hours. A more thorough consideration of the life and power of Christ as they exist in the individual lives of the members of the Mystical Body: the application and function of faith, justification, the life of grace, the theological and moral virtues, in relationship to the perfection of the individual. *Required of Catholic students.*
50. REVELATION AND CHRISTOLOGY. Three credit hours. God's revelation of Himself in scripture and in the Christ-Event, as incarnating the message of divine truth. Man's personal response to Christ in faith, traced to its origins in history.
51. CHRISTIAN LIFE WITHIN THE CHURCH. Three credit hours. Nature of the church as the *People of God*. Its structured organism. Its role in the salvation of the world. Sanctifica-

Theology

tion of the Christian by his share in the divine life, coming to him principally through the liturgy as centered in the Eucharistic sacrifice and in the sacraments.

Upper Division Courses

105. JUDAIC THOUGHT IN SCRIPTURE AND RABBINICAL SOURCES. Three credit hours.
107. THE CULTURE OF THE JEW FROM TALMUDIC, POST-BIBLICAL, TO MODERN TIMES. Two credit hours.
108. HISTORY OF THE JEWISH PEOPLE. Two or three credit hours.
110. THE THEOLOGY AND HISTORY OF THE ECUMENICAL COUNCILS. Three credit hours.
112. THEOLOGY IN THE ELEMENTARY SCHOOLS. Three credit hours.
113. THEOLOGY IN SECONDARY SCHOOLS. Three credit hours.
114. FORM AND TECHNIQUE IN RELIGION CLASS. Three credit hours.
115. PROTESTANT CHURCHES IN THE UNITED STATES. The historical background of the major Protestant denominations, a study of the doctrine, ritual, and organization of each sect, and a comparison of individual sects with one another and with the Catholic Church. The course is expository rather than controversial. Its purpose is to give the student a better understanding of the various Protestant sects.
118. INTRODUCTION TO HISTORY OF RELIGIONS. Three credit hours.
119. REFORMATION THEOLOGY. Three credit hours.
125. EASTERN ORTHODOXY, THEN AND NOW. Three credit hours.
126. HISTORICAL ROAD OF EASTERN ORTHODOXY. Three credit hours.
127. MODERN THEOLOGY OF ECUMENISM. Three credit hours.
130. THE THEOLOGY OF PRESENT-DAY SPIRITUALITY. Three credit hours.
132. THEOLOGY OF NEW TESTAMENT SPIRITUALITY. Three credit hours.
133. CHRISTOLOGICAL TRENDS, OLD AND NEW. Three credit hours.
135. CULT AND SANCTIFICATION. Three credit hours. (Milford College)
140. THE SUPERNATURAL LIFE OF MAN (THEOLOGY OF GRACE). Three credit hours. A study of the supernatural destiny of man and the nature and process of justification. Special attention is devoted to sanctifying and actual grace; the

Theology

theological virtues of faith, hope and charity; the gifts of the Holy Ghost. Chief means of preserving and developing supernatural life: prayer, sacraments and the holy sacrifice of the Mass are explained.

145. **THEOLOGY OF SAINT PAUL.** Three credit hours. An introduction to the principal ideas stressed by Saint Paul in his epistles. Through historical survey of man, his times and environment deeper insight to the significance of his key ideas is sought. Special attention is given to Christology, the Pauline concept of original sin and the process of justification, and the relationship between the old and new law.
146. **THE INCARNATION IN HUMAN LIFE.** Three credit hours. Orientation to contemporary theological-anthropological thought. (Ed 146)
147. **FORM AND TECHNIQUE FOR THE RELIGION CLASS.** Three credit hours. Contemporary catechetical theory; analysis of texts and materials; creative response through the arts. (Ed 147)
148. **RELIGIOUS PSYCHOLOGY.** Three credit hours. Growth toward Christian maturity and the faith response. (Ed 148)
149. **MORAL CATECHESIS.** Three credit hours. The Christian life in Biblical, historical, and contemporary perspective: sin, conversion, grace, and the formation of conscience. (Ed 149)
155. **MARIOLOGY.** Three credit hours.
165. **THE CONTEMPORARY THEOLOGY OF THE PEOPLE OF GOD.** Three credit hours. The Church as mystery; the pilgrim church; the church's place in salvation history, as studied in these documents:
Mystici Corporis of Pius XII
Ecclesiam Suam of Paul VI
De Ecclesia, Vatican II
Constitution on the Liturgy, Vatican II
The Church in the Modern World, Vatican II.
166. **CHRISTIAN EXISTENCE AND RELIGIOUS LIFE.** Three credit hours. (Milford College)
167. **FUNCTION OF THE SACRAMENTS IN THE DEVELOPMENT OF CHRISTIAN PERSON.** Three credit hours.
170. **THE NEW LITURGICAL THEOLOGY.** Three credit hours. A thorough commentary on the *Constitution on the Sacred Liturgy*, of Dec. 4, 1963. Background for reform of the Liturgy. Practical norms to attain reform and promote the

Theology

Liturgy. Liturgy and doctrine: The Paschal Mystery; the Risen Christ; the History of Salvation; the Liturgy and Mystery; Sacrifice and Sacraments; priesthood of the laity; the juridical power of the bishop in the *Constitution*; concelebration; Eschatology and the Liturgy; sacred music; sacred arts; Liturgy and Christian Unity.

175. **SACRAMENTAL ENCOUNTER WITH CHRIST.** Three credit hours. An in-depth view of the sacraments as seen through Vatican II.
180. **AN INTRODUCTION TO THE OLD TESTAMENT.** Three credit hours. (Milford College)
185. **AN INTRODUCTION TO THE NEW TESTAMENT.** Three credit hours. (Milford College)
189. **THE CHRISTIAN AND THE WORLD.** Three credit hours.
190. **INTRODUCTION TO THE BIBLE.** Two or three credit hours. An analysis of the background of Sacred Scripture. Principles of understanding and interpretation of both the Old and the New Testament. A survey reading of the Scripture.
195. **SPECIAL TOPICS IN SACRED SCRIPTURE.** Three credit hours. (Milford College)

Christian Culture

All candidates for a degree in residence for eight semesters must have completed eight hours among the courses listed below. Pl 132 and So 125 are required for all degrees.

- Ec 132. **ECONOMIC THEORY AND SOCIAL ORDER.** Three credit hours.
- En 107. **THEOLOGICAL THEMES IN CONTEMPORARY LITERATURE.** Three credit hours.
- En 108. **THEOLOGICAL THEMES IN AMERICAN LITERATURE.** Three credit hours.
- Gk 104. **CHRISTIAN ANTIQUITY.** Three credit hours.
- Hs 104. **CHRISTIAN ANTIQUITY.** Three credit hours.
- Hs 111. **THE EARLY MIDDLE AGES, 300-1154.** Three credit hours.
- Hs 112. **THE HIGH MIDDLE AGES, 1154-1496.** Three credit hours.
- Hs 119. **RENAISSANCE AND HUMANISM.** Three credit hours.
- Hs 121. **RELIGIOUS UPHEAVAL IN THE 1500's.** Three credit hours.
- Hs 149. **THE CATHOLIC CHURCH IN THE UNITED STATES.** Three credit hours.

Theology

- Lt 122. INTRODUCTION TO A STUDY OF THE LATIN FATHERS. Three or four credit hours.
- Lt 135. EARLY CHRISTIAN POETS. Three credit hours.
- Pl 132. PERSONAL AND SOCIAL ETHICS. Three credit hours. Required of all degree students as Christian Culture.
- Pl 135. AMERICAN PHILOSOPHY AND CHRIST. Three credit hours.
- Pl 170. CURRENT PROBLEMS IN CATHOLIC PHILOSOPHY. Three credit hours.
- Pl 190. SEMINAR: PHILOSOPHY AND SCIENCE. Three credit hours.
- So 125. MARRIAGE. Two credit hours.
- So 126. THE FAMILY. Two credit hours.
- So 195. REBUILDING THE SOCIAL ORDER. Two credit hours.
- Th All upper division courses.

Departments—

The College of Business Administration

Accounting (Ac)

Staff: MR. WILZ, *chairman*; MR. BEHLER, MR. MALY, MR. SCHUTZMAN, MR. SCHWEIZER, MR. SMITH.

Assisted by: MR. BOBST, MR. DUGAN, MR. FINUCAN, MR. FLEMING, MR. GRATHWOHL, MR. GRATTON, MR. SCHAPPACHER, MR. SCHLEGEL, MR. SELZER.

UNDERGRADUATE DIVISION

Lower Division Courses

51. PRINCIPLES OF ACCOUNTING. Three credit hours. Elementary principles and procedures supplemented with practical problems and practice sets.
52. PRINCIPLES OF ACCOUNTING. Three credit hours. A continuation of Ac 51 which is also prerequisite.

Upper Division Courses

109. SYSTEMS, METHODS, AND PROCEDURES. The objective of this course is to provide an understanding of the principles of business data processing systems, procedures, and methods. The structure and function of key-driven, punch-card, and electronic data processing machines are studied. Integrated data processing and work simplification concepts are stressed. Prerequisite: Ac 52.
110. MANAGERIAL ASPECTS OF DATA PROCESSING. Three credit hours. The objective of this course is to provide an understanding of electronic data processing systems in business and their effect on management organization and control. The general structure and logic of electronic computers are explained, along with "common language" and punch-card equipment. The phases of planning for and evaluating the feasibility of EDP systems are also covered.
151. INTERMEDIATE ACCOUNTING. Three credit hours. A broad background of theory coordinated with practical problems. Prerequisite: Ac 52.

Accounting

152. **INTERMEDIATE ACCOUNTING.** Three credit hours. A continuation of Ac 151 which is also prerequisite.
153. **ADVANCED ACCOUNTING PROBLEMS.** Three credit hours. Advanced study in accounting theory and related problems applicable to partnership, special sales procedures, insurance, and fiduciaries. Prerequisite: Ac 152.
154. **ADVANCED ACCOUNTING PROBLEMS.** Three credit hours. A continuation of Ac 153 with emphasis on parent company, subsidiary accounting, foreign exchange, and public accounts. Prerequisite: Ac 152.
155. **INDUSTRIAL ACCOUNTING.** Three credit hours. Study of elements involved in industrial production with special emphasis on costs and reports. Prerequisite: Ac 152.
156. **INDUSTRIAL ACCOUNTING.** Three credit hours. A continuation of Ac 155 which is also prerequisite.
157. **TAXATION.** Three credit hours. Intensive study of tax laws in relation to their underlying principles. Prerequisite: Ac 52.
158. **ADVANCED TAXATION.** Three credit hours. Prerequisite: Ac 157.
161. **AUDITING PRINCIPLES.** Three credit hours. A comprehensive study of the fundamental principles of auditing. Prerequisite: Ac 155.
162. **ADVANCED AUDITING PRINCIPLES.** Two or three credit hours. Prerequisite: Ac 161.
163. **C.P.A. REVIEW.** Three credit hours. An intensive review of theory, auditing, accounting practice, and business law based on recent examinations by the state boards and prepared by the American Institute of Certified Public Accountants. Prerequisite: Courses required for a major in accounting.
164. **C.P.A. REVIEW.** Three credit hours. A continuation of Ac 163.
166. **ANALYSIS OF FINANCIAL STATEMENTS.** Three credit hours. A study of the significance, development and technique of financial statement analyses of business enterprises. Prerequisite: Ac 52.
195. **CASES AND PROBLEMS IN ACCOUNTING.** Two or three credit hours. Basic principles of accounting and their application to accounting theory, research, and practice.
197. **TUTORIAL COURSE.** Two or three credit hours. Special reading and study for advanced students.

Accounting

For graduate courses in accounting see **Business Administration: Graduate Division.**

For the M.B.A. degree with a concentration in accounting see **Graduate School: the Master of Business Administration.**

Business Administration (BA)

The following are general business service courses required of all students in Business Administration. Professors are assigned to these courses by the other departments in the College of Business Administration.

23. **BUSINESS CORRESPONDENCE I.** Two credit hours.
24. **BUSINESS CORRESPONDENCE II.** Two credit hours.
190. **BUSINESS STATISTICS.** Three credit hours. A study of the manner of presentation of specific and general business reports for graphic determination of economic significance. A study of mathematical tools as used in business and industry including mode, mean, median and coefficient of correlation.
193. **BUSINESS LAW I.** Three credit hours. A general introduction to American business law. Contracts: essential, form, legality and enforcement. Property. Negotiable instruments.
194. **BUSINESS LAW II.** Three credit hours. General review of the introduction to business law. Creation, powers, termination, liabilities of principal and agent. Partnerships. Corporations. Recommended prerequisite: BA 193.
196. **BUSINESS ADMINISTRATION PROBLEMS.** Three credit hours. A case study approach is involved. Material is provided to afford opportunities for students to develop their analytical ability and decision-making skill and to utilize their imagination in devising feasible programs of action. Some descriptive material is presented to make case studies meaningful. Recommended only for seniors.

GRADUATE DIVISION

Students selecting courses for the degree of Master of Business Administration must include the four survey courses—BA 201, 202, 203 and 204—in their programs. They will include appropriate courses from the offerings of the undergraduate division numbered 100 or above. As a climax to their work they will select a 200 seminar course dealing with practical problems.

- 200A. **BASIC ACCOUNTING.** Four credit hours. Prerequisite for BA 203, Managerial Accounting.

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- 200B. **BASIC ECONOMICS.** Four credit hours. An accelerated course in the principles of economics for MBA students without previous course work in economics.
- 200C. **BASIC HOSPITAL ACCOUNTING.** Four credit hours. Prerequisite for BA 233, Hospital Financial Management.
- 200D. **BASIC MARKETING.** Two credit hours. An overview of the distribution system that operates within the environment of the United States' economy from both the institutional and functional point of view. Marketing policies are discussed within the existing governmental framework.
201. **ECONOMICS OF BUSINESS.** Three credit hours. Introduction to major areas of economics judged most useful to the business executive. Functions of the economic system; national income; business cycles, forecasting, government economics. Keynesian economic analysis.
202. **QUANTITATIVE BUSINESS METHODS.** Three credit hours. Application of quantitative methods to the solution of recurring business problems. Basic mathematical models; breakeven, forecasting, linear programming, probability, scheduling, transportation, and waiting line.
203. **MANAGERIAL ACCOUNTING.** Three credit hours. The contribution of accounting to efficient business administration. Basic concepts; budgeting; the operation of an accounting system; cost analysis; cost-standards; financial statements.
204. **ADMINISTRATIVE OPERATION.** Three credit hours. Techniques of planning, organizing, and control in business. Environmental factors; dynamics of human relations; functions; structure.
209. **RESEARCH IN BUSINESS.** Three credit hours. Understanding and skills necessary to the intelligent use of research in business. In this course two credit hours are devoted to research techniques and procedures. The remaining credit hour is awarded on completion of an actual research paper. A separate grade is given for each phase of the course.
210. **APPLIED ECONOMIC ANALYSIS.** Three credit hours. Economic analysis as applied to practical business operation. Tools of economic analysis; types of economic competition and their effect on individual firms and industries. Case study method of instruction used.
212. **BUSINESS FORECASTING.** Three credit hours.
215. **GOVERNMENT REGULATION OF BUSINESS.** Three credit hours. Analysis of the influence of Mercantilist, Classical, Key-

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- nesian, and Socialist theories on public policies towards business competition in modern industrial economies, which employ a cross-cultural and interdisciplinary approach towards the formation of a workable structure of competition as is evidenced by contemporary theories and practices in the United States, Canada, Great Britain, Europe, and Japan.
218. **ECONOMICS OF LABOR.** Three credit hours. A study of determinants of the competitiveness of labor markets; study of economic determinants of employment levels. Seminar method is used.
220. **EXECUTIVE PRACTICES.** Three credit hours. This course is designed to demonstrate the techniques available for handling complicated human relations situations. The discussion centers around psychological (behavioral) and sociological readings and their application to actual case situations.
222. **QUANTITATIVE DECISION-MAKING.** Three credit hours. An introduction to the logical analysis of business problems in which decision-making under uncertainty is required. Probability and other quantitative techniques are discussed and used.
226. **MANAGEMENT PLANNING.** Three credit hours. A seminar.
240. **MARKETING THEORY AND PRACTICE.** Three credit hours. The course is designed to review basic marketing principles and to present new and significant trends and advanced theory. Case studies are employed to develop an understanding of the nature and scope of marketing problems and how to develop workable solutions.
241. **LOCATION OF BUSINESS AND INDUSTRIAL ACTIVITY.** Three credit hours. A study of the factors that influence the location of productive facilities, and the marketing of the finished product. Interrelationship of source of supply, location of productive facilities, and the market area.
242. **MARKETING RESEARCH.** Three credit hours. Methods and techniques of marketing research; its use as a tool of management; cases in marketing research.
243. **INDUSTRIAL MARKETING.** Three credit hours. A study of the problems of marketing industrial products, including the management of the marketing channels and the pricing of the products. Also covered is the area of selling and distribution of the products.

Business Administration

245. **ADVERTISING: THEORY AND PRACTICE.** Three credit hours. The role of advertising in the marketing process is examined for ways in which it can be profitably employed. The advertising campaign and its creative and media components are studied to develop an understanding of the decision processes involved. Case studies are utilized. Recommended prerequisite: BA 240.
250. **PROBLEMS IN BUSINESS FINANCE.** Three credit hours. In this course the principles learned in Corporation Finance are utilized. Financing current operations, policies, promotion, expansion, combination and selected comprehensive problems involving financial analysis and planning of capital structures. Case study method of instruction used.
252. **INVESTMENT MANAGEMENT.** Three credit hours. A study of the selection and management of a portfolio, based on carefully evaluated probabilities and sound techniques of security analysis. Prime emphasis is on reasoning and interpretation rather than on description.
254. **BUDGETING PROCEDURES.** Three credit hours. Preparation of budgets and managerial use of business budgets. Budget allocation for sales, production, materials, labor, and overhead. Budget reports.
255. **CONTROLLERSHIP.** Three credit hours. The course is designed to demonstrate the duties and responsibilities of the controller and to present new and advanced techniques in taxes and accounting.
260. **PROBLEMS OF LABOR.** Three credit hours. An analysis of labor-management problems through the use of the "Incident Process."
262. **ADVANCED PERSONNEL MANAGEMENT.** Three credit hours. A case method approach to complex personnel problems at the management level.
263. **SEMINAR: COLLECTIVE BARGAINING.** Three credit hours. This course is designed to give the student a broad background in the historical development of collective bargaining and some of the problems that arise in the day-to-day administration of the labor-management agreement. Students will be expected to approach a particular problem in an area of their choice and to develop their methodological skills in gathering, analyzing, and presenting data pertaining to it.
264. **PERSONNEL AND THE LAW.** Three credit hours. A survey of state and federal legislation pertaining to the employee. Using a seminar approach, the course reviews the historical

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- development, current status, and economic implications of laws enacted by various levels of government and designed to protect the individual worker's basic needs in our society.
270. **INTRODUCTION TO OPERATIONS RESEARCH.** Three credit hours.
274. **MATERIALS MANAGEMENT.** Three credit hours. Consideration of the materials function in an industrial organization as an integrated activity. A detailed review of inventory, purchasing and traffic operations, with a discussion of objectives and measurements. Lecture, class participation, and cases are utilized.
276. **PRODUCTION CONTROL.** Three credit hours. Course is designed to introduce students to current and advanced production and inventory control concepts and methods, emphasizing the functions inventories serve and the pressures and costs bearing upon inventory and production decisions. Recommended prerequisite: BA 190.
278. **QUALITY CONTROL.** Three credit hours. This course is presented as a body of technical, analytical, and managerial knowledge. The quality function is explored not only in a statistical context but also in its effect upon the economics of cost, organizational impact, and the engineering function. Recommended prerequisite: BA 190.
280. **OFFICE MANAGEMENT.** Three credit hours. A study of the principles of management and their application to office management, and the duties and responsibilities of the office manager. The student will be given the information needed to comprehend and understand the important office management functions in today's business. The class will include lecture and case discussion.
282. **SMALL BUSINESS OPERATION.** Three credit hours. This course is designed primarily for students who work in small businesses or own businesses. Organization, location, management, finance, production, and marketing problems are studied. The course combines the lecture and case method of study.
295. **INDIVIDUAL READINGS AND RESEARCH.** Two or three credit hours. Open to especially qualified students with the consent of the Chairman of the Department.
299. **BUSINESS ADMINISTRATION PROBLEMS.** Three credit hours. The purpose of this course is to provide an opportunity for the student to integrate his core and concentration background

Business Administration

with that of other graduate students through the use of selected cases. Emphasis is placed on environment, internal management process, and performance.

CONCENTRATION IN HOSPITAL ADMINISTRATION

- 230. HOSPITAL ORGANIZATION AND ADMINISTRATION: PRINCIPLES. Three credit hours.
- 231. HOSPITAL ORGANIZATION AND ADMINISTRATION: PRINCIPLES. Three credit hours.
- 232. WORKSHOP: HOSPITAL ORGANIZATION AND ADMINISTRATION. Six credit hours.
- 233. HOSPITAL FINANCIAL MANAGEMENT. Three credit hours. Prerequisite: BA 200C.
- 234. HOSPITAL LAW AND HOSPITAL PURCHASING. Three credit hours.
- 235. WORKSHOP: HOSPITAL BUSINESS MANAGEMENT. Six credit hours.
- 236. HOSPITAL PERSONNEL ADMINISTRATION. Three credit hours.
- 237. SEMINAR: HOSPITAL ADMINISTRATION PROBLEMS. Three credit hours.
- 238. WORKSHOP: PERSONNEL ADMINISTRATION AND HOSPITAL PROBLEMS. Six credit hours.
- 239. HOSPITAL RESIDENCY. No credit hours.

Economics

The staff and the courses for the B.S.B.A. (Economics) are included with those for the A.B., B.S. (Economics) in the College of Arts and Sciences.

Finance (Fi)

Staff: DR. DONNELLY, *chairman*; MR. DREESE, MR. ROTHWELL.

Assisted by: MR. FJORD.

Upper Division Courses

- 150. MONEY AND BANKING. Three credit hours. Structure and operation of the present money and banking system; theory and history of money; credit and commercial banking: international financial relationships; Federal Reserve System. Prerequisites: Ec 33, 34. (Ec 150)

Finance

- 153. FINANCIAL INSTITUTIONS. Three credit hours. A survey of all financial institutions including banking and monetary institutions, business finance, financial intermediaries, saving and consumer finance, and public finance and monetary policy.
- 154. STOCK MARKETS. Three credit hours. A study of securities, the method and manner of their exchange, the functions of securities markets, and the factors promoting changes in securities' prices.
- 155. INVESTMENTS. Three credit hours. Survey of the economic bases of investment practice; techniques of security analysis and portfolio management. Prerequisites: Ec 33, 34.
- 156. PUBLIC FINANCE AND TAXATION. Three credit hours. Analysis of the various forms of taxation; shifting and incidence of taxation; public borrowing; non-tax revenues; public expenditures; the effects of government revenue and expenditures on our economy. (Po 156)
- 160. BUSINESS FINANCE. Three credit hours. The various types of American enterprises with special emphasis on the corporation—its organization, management, financing and budgeting.
- 161. PROBLEMS OF FINANCIAL MANAGEMENT. Three credit hours. A continuation of basic theory of business finance. Major problems and methods used in financing business enterprise are studied primarily from the viewpoint of business management. Prerequisite: Fi 160.
- 162. INSURANCE. Three credit hours. A combined study of the principles and practices of life and property insurance designed to bring together principles and practices of insurance and the ways in which it may be employed in the interest of personal, family, and business welfare.
- 163. REAL ESTATE PRINCIPLES AND FINANCE. Three credit hours.
- 166. ANALYSIS OF FINANCIAL STATEMENTS. Three credit hours. A study of the significance, development and technique of financial statement analyses of business enterprises. Prerequisite: Ac 52.
- 168. SEMINAR IN FINANCE. Three credit hours. Management of fixed and circulating capital. Planning of short term and long term needs and sources. Lectures and case studies are used. Students in groups analyze simplified cases.

Finance

169. **RESEARCH IN FINANCE.** Three credit hours. A directed study in a selected field of finance by advanced majors in finance. Projects must have the approval of the chairman of the Department of Finance.
195. **CASES AND PROBLEMS IN FINANCE.** Three credit hours. A case method study of a wide variety of contemporary financial problems and business situations that usually pose debatable alternatives of action. The process of decision-making involved requires appropriate use of theory as well as the need for proficiency in a number of analytical techniques useful in handling the quantitative aspects of cases. Prerequisite: Fi 160. Recommended prerequisite: Fi 166.
197. **TUTORIAL COURSE.** Two or three credit hours. Special reading and directed study for advanced students.

Approved Electives: Ec 135, 148; Ac 151, 152, 157, 158.

Management and Industrial Relations

Staff: DR. HAYES, *chairman*; MR. ARLINGHAUS, DR. BRYAN, DP. BRYSKI, MR. KLEKAMP, DR. THI ERAUF.

Assisted by: MR. CENTNER, MR. CROTTY, DR. DONNELLY, MR. GROSSE, MR. KLEE, DR. MCDAVID, MR. O'CONNELL, DR. QUATMAN, DR. SCHULTZ, MR. SHAW. MR. SHEERAN, MR. TONTI, MR. TUDOR.

Management (Mg)

Lower Division Course

90. **PRINCIPLES OF MANAGEMENT.** Three credit hours. This course is designed to prepare students in the fundamental process which is applicable to all forms of business organization. Emphasis is placed on those organizational and managerial concepts considered essential for business decision making. Prerequisite: Ec 33, 34.

Upper Division Courses

102. **WAGE AND SALARY ADMINISTRATION.** Three credit hours. This course describes job-evaluation principles and analyses the major methods employed for the administration of wages and salaries. Attention is given to job descriptions, financial incentive plans, wage and salary studies, and the important problems of wage and salary administration. Prerequisite: Mg 90.

Management

103. **PRODUCTION MANAGEMENT.** Three credit hours. Production management is the process by which resources are allocated within the firm for the creation of goods and services. This course will be concerned with the decision making related to such resource allocation and will provide students with analytical tools to optimize the results of factor allocation. Prerequisite: Mg 90.
104. **MANAGERIAL METHODS ANALYSIS.** Three credit hours. To provide the student with some important managerial techniques available for optimum effectiveness from the methods and procedures used in the business organization. Areas to be considered are process charting, work and time measurement, performance rating, work sampling, and paperwork procedures. Prerequisite: Mg 90.
105. **MANAGERIAL POLICY FORMULATION.** Three credit hours. A case course designed to reinforce the student's knowledge of the mechanics of the management process and to acquaint him with the development of business policies through the study and resolution of actual management situations.
106. **PRODUCTION CONTROL.** Three credit hours. A functional approach to the study of production control is presented with major emphasis on the industrial organization. Cases and problems in the areas of forecasting, invention, control, routing, scheduling, dispatching, and expediting are analyzed. Prerequisite: Mg 90.
107. **HUMAN RELATIONS AND MOTIVATION.** Three credit hours. To assist the student to develop an understanding of the current concepts of human behavior as applied to the business organization. The disciplines of psychology and sociology are utilized to aid in establishing a basis for the analysis and solution of the human aspects of business decision.
108. **RESEARCH IN MANAGEMENT.** Three credit hours. Application of research methods to selected managerial problems is attempted. Emphasis is placed on acquiring familiarity with the sources of information of value to the business manager and on the interpretation and presentation of research results. Prerequisite: Mg 90.
109. **SYSTEMS, METHODS, AND PROCEDURES.** Three credit hours. Cases and problems are utilized. Prerequisite: Mg 90.

Management

110. **MANAGERIAL ASPECTS OF DATA PROCESSING.** Three credit hours. The objective of this course is to provide an understanding of electronic data processing systems in business and their effect on management organization and control. The general structure and logic of electronic computers are explained, along with "common language" and punch-card equipment. The phases of planning for and evaluating the feasibility of EDP systems are also covered.
111. **INTRODUCTION TO QUANTITATIVE ANALYSIS FOR BUSINESS.** Three credit hours. Mathematical concepts and techniques applied to business and economics. Topics include linear programming, flow diagrams, maxima and minima of functions, game theory, matrices, and other mathematical concepts relevant to management of economic enterprises.
112. **CONTEMPORARY MANAGEMENT PROBLEMS.** Three credit hours. An examination of several important problems in the area of administrative management. Specific problems discussed vary from one semester to another. Examples of subjects to be discussed: managerial authority, business ethics, management and society, patterns of management, philosophy of management. Prerequisite: Mg 90.
115. **PERSONNEL ADMINISTRATION.** Three credit hours. A study of principles and practices in the administration of human relations in the industrial and commercial world. Emphasis is placed upon the use of scientific techniques and devices in the development of a well-rounded personnel program. (IR 115)
130. **LABOR ECONOMICS.** Three credit hours. A survey of organized labor and labor law; examination of wage determinants and wage theory; examination of causes and remedies of unemployment. (Ec 130)
195. **CASES AND PROBLEMS IN MANAGEMENT.** Three credit hours. Case studies of selected management problems with emphasis on the application of statistical techniques for analysis and solution.
197. **TUTORIAL COURSE.** Three credit hours. The research in scholarly journals on a management topic of current import. Open to students only with consent of instructor.

Approved Electives: Ac 155; IR 128, 195; and others upon consultation with, and approval of, the Department.

Industrial Relations

Industrial Relations (IR)

Upper Division Courses

115. **PERSONNEL ADMINISTRATION.** Three credit hours. A study of principles and practices in the administration of human relations in the industrial and commercial world. Emphasis is placed upon the use of scientific techniques and devices in the development of a well-rounded personnel program. (Mg 115)
116. **LABOR RELATIONS.** Three credit hours. A study of issues and problems involved in union-management relations; an evaluation of collective bargaining as a method for resolving labor disputes in our economic system; case studies of labor disputes. (Ec 116)
119. **HISTORY OF THE LABOR MOVEMENT.** Three credit hours. A study of workers' movements in the U. S.; comparison of characteristics of different organizations from the Colonial period to the present. (Ec 119)
120. **LABOR LEGISLATION.** Three credit hours. A study of the origins and development of labor law in the U. S.; emphasis on laws treating injunctions, worker combinations, labor-management relations, internal union affairs, and working conditions. (Ec 120)
122. **CURRENT LABOR PROBLEMS.** Three credit hours. A study of various normative and analytical frameworks for examining labor problems; application of these frameworks to several important problems facing the labor movement today. Prerequisite: IR 130. (Ec 122)
123. **RESEARCH IN INDUSTRIAL RELATIONS.** Three credit hours. A survey of the tools essential for sound research in problems in industrial relations. Specific current problems are studied to insure competence in the use of research tools. Prerequisite: IR 130.
128. **INDUSTRIAL PSYCHOLOGY.** Two or three credit hours. A review of the principles of sound psychological procedure as applied to personnel in industry and commerce. Prerequisite: Ps 31. (Ps 128)
130. **LABOR ECONOMICS.** Three credit hours. A survey of organized labor and labor law; examination of wage determinants and wage theory; examination of causes and remedies of unemployment. (Ec 130, Mg 130)

Industrial Relations

195. CASES AND PROBLEMS IN PERSONNEL RELATIONS. Three credit hours. Case studies in selected personnel problems with emphasis on the application of relevant behavioral science research and concepts.
197. TUTORIAL COURSE. Two or three credit hours. Content to be determined according to the needs of the student.

Approved Electives: Upon consultation with, and approval of, the Department.

Marketing (Mk)

Staff: DR. McDAVID, *chairman*; MR. CAROUSNE, MR. GROSSE, MR. JANOVIC, MRS. NELSON.

Assisted by: MR. FOGG, MR. HELMERS, MR. McMULLIN, MR. RASMUSSEN, MR. ZIMMER.

Lower Division Course

70. PRINCIPLES OF MARKETING. Three credit hours. This course contains an overview of the distribution system of the United States economy from both the institutional and functional point of view. A survey and an evaluation of current institutions for the distribution of industrial and consumer goods (wholesaling and retailing) serve as the background for the study of the functions in distribution such as selling (advertising, personal sales, and sales promotion), buying, storage, transportation, and marketing information. Marketing policies are discussed within the existing governmental framework.

Upper Division Courses

171. MARKETING POLICY. Three credit hours. This course increases the problem-solving ability of students by requiring their continuous participation in a series of case-studies. These deal with marketing strategy and policy, and problems will be examined, analyzed, and discussed in depth. The effects of the proposed marketing actions will be projected from the viewpoint of management. Mk 171 is a prerequisite for other upper division courses.
172. MARKETING RESEARCH. Three credit hours. The place of marketing research as a major management tool will be examined. Applications of marketing research will be discussed: determination of the needs of consumers and of marketing intermediaries; measurement of potential markets; sales forecasting; effectiveness of advertising; use of motivation research. Special attention will be given to test-marketing and the use of panels. Prerequisite: BA 190.

Marketing

174. INDUSTRIAL MARKETING. Three credit hours. The special problems of marketing industrial products. Marketing planning as a management function. Management of the marketing channels. Pricing of industrial products. Getting the industrial products sold. Efficient physical distribution of industrial products. Customer services.
175. MARKETING MANAGEMENT. Three credit hours. The need for marketing planning. Changes in the economy over a period of time. The need for new products to replace existing products and for new marketing techniques. The management of personal selling. The co-ordination of advertising with all other aspects of marketing. The development of policy toward changing the items comprising the present product-lines. Prerequisite: Nine hours of upper division courses in Marketing.
177. INTERNATIONAL MARKETING. Three credit hours. Conditions peculiar to international distribution of United States goods and services and the effects of this distribution on the national welfare are the bases for the study of international marketing organizations and methods. Technical and financial complexities, such as pricing, foreign collections, foreign exchange, and international banking facilities, are explained.
178. CREDITS AND COLLECTIONS. Three credit hours. Nature, instruments, and place of credit in the economy. Management of consumer, mercantile, and bank credit. Analysis of credit risk. Management of collection and credit control.
179. PURCHASING. Three credit hours. The purpose of this course is to give the student a thorough grounding in the principles and practices of purchasing. Emphasis is placed on the techniques involved in making decisions on the right quality and quantity at the right prices, price policies, sources of supplies, and standards of performance.
180. PHYSICAL DISTRIBUTION ANALYSIS. Three credit hours. The logistics problems of the firm will be examined as a part of the overall distribution process. Emphasis will be on an evaluation of the physical movement functions of marketing, such as transportation, storage, and optimum allocation of products to various geographical locations. The quantitative approach is stressed and inventory control, product flow, and plant location factors are all analyzed.
181. RETAILING. Three credit hours. The purpose of the course is to orient the marketing student in the basics of retailing, from the point of view of the current ferment in retailing.

Marketing

Among the traditional functional areas of study are retailing careers; store location, design, and layout; retail organization; buying and merchandising; customer services; and retail control.

183. **ADVERTISING.** Two or three credit hours. A study of the institutions peculiar to American advertising is followed by the study of the planning of the advertising campaign, the mechanics of advertising, and media strategy. Stress is also placed on the economic and social effects of advertising along with society's reactions to advertising.
186. **SALES MANAGEMENT.** Three credit hours. The role of personal selling in marketing. The selection, training, and assignment of the sales force. Motivation, compensation, and promotion of it. Advantages and disadvantages of the commission plan of compensation. Continuous training of the sales force.
187. **SALESMANSHIP.** Two or three credit hours. The stress is on the understanding of selling—analyzing the dynamics of a sale. It offers the student an opportunity to understand the function of persuasive leadership as it relates to commerce and to other business relationships. The techniques of persuasive leadership as it applies to the buying of goods and services are studied and practiced.
195. **CASES AND PROBLEMS IN MARKETING.** Three credit hours. In-depth study and discussion of contemporary marketing developments. Subjects will vary from semester to semester in order to advance the knowledge of the marketing student in specialized marketing areas. Prerequisite: Nine hours of upper division marketing courses.
197. **TUTORIAL COURSE.** Two or three credit hours. Research, meetings, and attendance at scheduled lectures as determined by the advisor. Prerequisite: Permission of the chairman.

Approved Elective: Ec 145.

The Graduate School

Administrative Officers

RAYMOND F. MCCOY, Ed.D.	Dean
THOMAS H. HANNA, Ed.D.	Assistant Dean
THOMAS J. HAILSTONES, Ph.D.	Director, Master of Business Administration Program; Dean, College of Business Administration
JAMES GAFFNEY, M.Ed.	Assistant to the Dean
W. JACK GROSSE, M.B.A., J.D.	Assistant to the Dean

The Graduate Council

RAYMOND F. MCCOY, Ed.D. (Chairman) . . . Dean, Graduate School;
Chairman, Department of Education
VYTAUTAS J. BIELIAUSKAS, Ph.D. Chairman,
Department of Psychology
THOMAS J. HAILSTONES, Ph.D. Director,
Master of Business Administration Program;
Dean, College of Business Administration
PAUL W. HARKINS, Ph.D., LL.D. Chairman,
Department of Classical Languages
ROBERT G. JOHNSON, Ph.D. Chairman,
Department of Chemistry
REV. ROBERT W. SCHMIDT, S.J., Ph.D. Chairman,
Department of Philosophy
WILLIAM J. LARKIN III, Ph.D. Chairman,
Department of Mathematics
REV. THOMAS G. SAVAGE, S.J., M.A. (Oxon.) Chairman,
Department of English
PAUL L. SIMON, Ph.D. Chairman,
Department of History
RAYMOND E. MILLER, Ph.D. Acting Chairman,
Department of Physics

Admission and Probation Committee

The Committee consists of the Chairman of the Department which the student is seeking to enter, the Dean of the Graduate School, and the Assistant Dean of the Graduate School.

History

The Graduate School was opened in 1946 under the direction of its present Dean, and its first graduate degrees were awarded in June of 1947. In the fall of 1952 the Master of Business Administra-

The Graduate School

tion program was added. Graduate degrees are currently offered in eleven subject fields described below. Numerous concentrations within the eleven fields have been added periodically during the twenty years of Graduate School operation.

Academic Calendar

The Graduate School Academic Calendar is integrated with the total University Calendar, which may be found at the front of this Catalogue.

THE MASTER OF ARTS

Xavier University offers programs leading to the degree of Master of Arts in classics, economics, English, history-political science, philosophy (summer only), physics, and psychology.

In the Master of Arts programs great emphasis is laid upon cultural and liberal pursuits. Yet, since Xavier's undergraduate program—the norm of admission for graduate students—calls for a broad background of general education, philosophy, and Christian culture, the final goal of the Master of Arts programs is that the student may come to possess a specialized knowledge of his chosen field, and an intelligent appreciation of its place in the wide panorama of human thought.

The Master of Arts is awarded to the candidate who has demonstrated a capacity for further study or teaching by satisfactorily completing a program of graduate work designed to give him these characteristics:

1. An understanding of the relations of his subject to allied subjects and to the synthesis of Christian culture, which is the basis of Western civilization.
2. A comprehensive knowledge of the broad field of learning in which the degree is conferred.
3. A specialized knowledge of a portion of that field.
4. Proven ability to do research in the special field of study.

General Requirements

In accordance with the above objectives the general requirements for the degrees are respectively:

1. Completion of such undergraduate prerequisites as will give assurance of the candidate's general educational background. Satisfactory completion of the Miller Analogies Test.
2. A reading knowledge of a foreign language.
3. Completion of a program consisting of at least twenty-four hours of integrated classroom study within the student's chosen field.

The Graduate School

4. Production of an acceptable thesis of a research character. To safeguard the cultural objectives it should be kept in mind that the result of research can be synthesis as well as analysis. For the thesis six credit hours (completing the required thirty hours) will be awarded on the recommendation of the thesis adviser. Three typed copies of the thesis are to be submitted after it is formally approved. Students in the Department of English may either write the thesis or substitute six additional hours of class work and a substantial research essay.
5. Completion of a final oral, comprehensive examination.

THE MASTER OF ARTS

- CLASSICS
- HISTORY
- PHILOSOPHY

Within the general requirements for the Master of Arts, graduate departments administering programs may add specific regulations. Candidates for these degrees are urged to maintain close relationship with the chairmen of their particular departments.

THE MASTER OF ARTS—ECONOMICS

The Master of Arts program in economics is designed to prepare students for doctoral study or for careers in government, teaching, industry, labor, or foreign service.

Applicants for admission must possess a bachelor's degree from an accredited college or university. Application forms may be obtained from the office of the Graduate School. The completed application form, along with a transcript of credits from the undergraduate college, must be submitted to the Graduate School. It is expected that the applicant have a minimum quality point of 2.5 (A=4) in his undergraduate work; however, the applicant's score in the Graduate Record Examination will also be taken into consideration.

Prerequisites

Normally the applicant will be expected to have had the following: six hours in Principles of Economics, three hours in Money and Banking or in monetary and fiscal theory, three hours in an intermediate theory course, and three hours of electives from the fields of labor, econometrics, and theoretical analysis, a total of fifteen hours of undergraduate prerequisites. If the applicant has not had these undergraduate courses, and yet gives evidence that he is qualified to pursue graduate study in economics, the Department of Economics at its discretion may allow the applicant to take these

or equivalent courses at Xavier University or at some other accredited institution. In exceptional instances some of these prerequisites may be waived.

All applicants are required to take the Graduate Record Examination before being admitted to graduate studies in the department of economics. If the applicant has taken this examination previous to his application to the Graduate School of Xavier University, he must provide the Department of Economics with an official report of his scores.

Program

Thirty semester hours of graduate work will be demanded of the applicant. Twenty-four of these hours will be devoted to fulfilling course of requirements, and the remaining six hours either to thesis requirements or to research seminars. Students may transfer up to six graduate credits from other institutions with approval of the department. With approval, students may take one or two upper-division undergraduate courses for graduate credit, provided they earn at least a grade of B and perform whatever added course requirements are assigned by the instructor. Certain graduate courses from other disciplines may be taken with the approval of the department.

Candidates for the Master of Arts in economics must either demonstrate a reading knowledge of a foreign language or successfully take an examination in the essentials of statistics and basic mathematics for economists. The candidate's choice must be approved by the department.

All degree students must take the Miller Analogies Test during their first semester of graduate work.

Courses in economics and *upper-division* undergraduate courses in other disciplines provide the following concentrations: Financial Economics, Industrial Economics, Quantitative Methods, Institutional Economics, Labor Economics, Public Economics, and Regional-International Economics.

THE MASTER OF ARTS—ENGLISH

The candidate for the Master of Arts degree in English must give substantial proof of his proficiency in literary criticism and textual analysis. He must show an ability to do research and a thorough factual knowledge of the history of English and American literature. The Department of English expects that all candidates for the Master of Arts degree in English will spend considerable time on individual study, literary and textual analysis, and research in addition to the actual course work. The knowledge of an undergraduate English major is presumed to be had by every candidate

for the Master of Arts degree in English. In addition, the ability to express oneself with mechanical accuracy and precision of idiom is demanded.

Students who envision the Master of Arts in English as a terminal degree are advised to elect a program consisting of thirty credit hours of course work and the writing of an extended research paper done in conjunction with a seminar. This research paper, properly bound, is to be filed with the Chairman, Department of English, no later than one month from the conclusion of the course during which the paper was written. At least half of the thirty hours must be in courses numbered 200 or higher, and at least two of the courses must be seminars. Students electing this program must pass an examination in a modern foreign language by the end of their second semester in graduate work. A candidate whose seminar research paper is concerned with an aspect of medieval literature may, if he chooses, substitute Latin. Students must also pass a written comprehensive examination in English and American literature, which should ordinarily not be taken until all class work has been completed. This examination is administered in the spring and in mid-summer, and is taken in two sessions.

The general provisions for the examination are indicated in the *Guide for English Majors*.

Those preparing for further studies in English, especially toward the doctorate, are advised to elect a program consisting of twenty-four hours of course work and the writing of a thesis. At least one-half of the twenty-four hours must be in courses numbered 200 or higher, and at least two of the courses must be seminars. The subject of the thesis must be approved by the department's committee for the graduate program. The thesis, for which six hours of credit are awarded, must be written under the guidance of a member of the faculty and must demonstrate the student's ability to do scholarly research of high quality. This thesis must be read and approved by the director of the thesis and two other readers from the faculty. In addition, the candidate must pass the written comprehensive examination in English and American literature mentioned above and an examination in a modern foreign language by the end of his second semester of graduate course work. If his thesis concerns the medieval period of English literature, he may substitute Latin for the modern foreign language. The student in this program must pass an oral examination on his dissertation and his course work.

Admission Requirements

1. Bachelor's degree from an accredited college or university.
2. A 2.5 overall undergraduate average and a 3.0 average in all English courses on the undergraduate level. This average

The Graduate School

is computed by assigning quality credits of 4 for each credit hour of A.

3. A minimum of thirty-six undergraduate credit hours in English which should include the survey of English literature from the Old English Period to the Twentieth Century; the survey of American Literature; at least one course in Shakespeare. Courses in aesthetics and literary criticism and in history of the English language are highly recommended. In case the applicant does not meet these requirements, he may be admitted as a special student until he makes up the necessary hours.
4. Recommendations from members of the Department of English in the college or university where he did his undergraduate work. One of these recommendations should come from the chairman of the Department of English of the college or university where the undergraduate work was completed.

Procedure of Admission

Any student applying for admission to the program leading to the Master of Arts in English must complete the following procedures before registration:

1. Submit to the Graduate School the completed application form for admission to the Graduate School.
2. Submit to the Chairman, Department of English, the completed application form for admission to the graduate program in English.
3. Arrange for transcript of previous college work to be sent to the Graduate School.
4. Submit to the Graduate School and to the Chairman, Department of English, his score on the Graduate Record Examination in Literature.
5. Arrange with the Chairman, Department of English, for a personal interview.

Part-time students may be admitted for their first semester of work prior to their personal interview. All admission procedures, however, must have been completed before the second registration.

Program

All candidates for the degree of Master of Arts in English are urged to include a course in the history of the English language. The courses selected on the 100 level (upper-division undergraduate courses) ought to complement their undergraduate work. The courses and seminars selected on the 200 level should build upon the undergraduate work in English. Since backgrounds on the undergraduate

The Graduate School

level may vary, each applicant should work out a program with the Chairman, Department of English, before beginning his graduate work.

THE MASTER OF ARTS—PSYCHOLOGY

The degree of Master of Arts in psychology is designed to prepare students for continuing their graduate studies to the doctorate level and to prepare students for employment in the areas of clinical, counseling, and industrial psychology.

Accordingly this degree is awarded to the candidate who has demonstrated a capacity for qualitative performance by completing satisfactorily a graduate program designed to give him these characteristics:

1. Broad advanced knowledge of the general field of psychology.
2. Either further breadth of knowledge (for those planning to continue immediately in a doctoral program) or specific knowledge of one major area of psychology in which he plans professional activity.
3. Proven ability to do research in psychology.

Program

To insure comprehensiveness, all candidates must include in their program each of the following courses designed in their whole to provide integrated coverage of the graduate field of psychology. For description of courses see listings under the Department of Psychology.

- Ps 177, THEORIES OF PERSONALITY I AND II. Four credit hours,
178. two each semester.
- Ps 201. CONTEMPORARY THEORY IN PSYCHOLOGY. Three credit hours.
- Ps 202. ADVANCED EXPERIMENTAL PSYCHOLOGY. Three credit hours.
- Ps 214. ADVANCED STATISTICS. Three credit hours.
- Ps 249. SEMINAR: PHILOSOPHICAL ISSUES IN PSYCHOLOGY. Three credit hours.
- Ps 283. PROFESSIONAL PROBLEMS IN PSYCHOLOGY. One credit hour.

To insure the attainment of his particular objective in graduate study in psychology, the student must include a concentration in one of the following *areas of concentration*:

General-Experimental Psychology

A minimum of seven credit hours selected from the following courses: Biological Basis of Animal Behavior, Learning and Motiva-

tion, Design of Experiments, Research Problems in Psychology, Communication, Social Psychology, Differential Psychology, Psychological and Achievement Tests.

Clinical Psychology

A minimum of thirteen credit hours selected from the following courses: Learning and Motivation, Psychopathology, Dynamic Psychology, Individual Tests of Intelligence, Counselling Principles and Techniques, Projective Techniques I and II, Research Problems in Psychology, Communication, Counselling and Psychotherapy, Remedial Reading. Practicum in Clinical Psychology is required.

Counselling Psychology

A minimum of thirteen credit hours selected from the following courses: Learning and Motivation, Developmental Psychology, Dynamic Psychology, Vocational and Educational Guidance, Psychological and Achievement Tests, Counselling Principles and Techniques, Individual Tests of Intelligence, Communication, Remedial Reading. Practicum in Counselling is required.

Industrial Psychology

A minimum of thirteen credit hours selected from the following courses: Occupational Information and Job Analysis, Marketing Research, Personnel Selection and Evaluation Techniques, Communication, Design of Experiments, Dynamic Psychology, Learning and Motivation. Practicum in Industrial Psychology is required.

As a climax to his program, each student must register for Ps 299, Master's thesis, six credit hours. He will prepare an acceptable thesis, which will be defended in his final oral examination.

Quantitative Requirements

Depending on the student's concentration, a minimum of thirty or thirty-six graduate hours is required for the degree of Master of Arts in psychology. These shall ordinarily be distributed as follows:

1. Seventeen credit hours in the core courses.
2. Seven or thirteen hours in the area of concentration.
3. Six hours awarded for Master's thesis.

Qualitative Requirements

The degree of Master of Arts in psychology will be awarded only to candidates *who have demonstrated a reading knowledge of a foreign language* and, in a final oral examination, have both successfully defended their thesis and successfully demonstrated their knowledge of the general field of psychology.

Admission Requirements

1. Bachelor's degree from an accredited college or university.
2. A 2.5 overall undergraduate average and a 3.0 average in all psychology courses. This average is computed by assigning quality credits of 4 for each credit hour of A.
3. Satisfactory performance on the Miller Analogies Test.
4. A minimum of eighteen undergraduate credit hours in psychology which should include experimental psychology (with laboratory), introductory statistics, psychology of personality, and/or abnormal psychology. Also courses in biological science and college mathematics are recommended as a preparation for graduate studies. In case the applicant does not meet these requirements, he may be admitted as a special student until he makes up the necessary hours.
5. Personality and character traits which are in agreement with ethical standards of psychology.

Procedures of Admission

Full-time students must complete the following procedures in advance of registration:

1. Submit to the Graduate Office the completed application form for admission to the Graduate School and special application form for admission to the department of psychology.
2. Submit transcript of previous college work.
3. Submit to the Graduate Office report of M.A.T. score or arrange with the Department of Psychology for examination.
4. Arrange with the Psychology Department for a personal interview. (It may be possible that the interviewing of students from considerable distance be delegated to a local psychologist by special arrangement.)
5. The Dean of the Graduate School will notify the applicant of official acceptance.

Part-time students may be admitted as special students for their first semester of work prior to M.A.T. results and personal interview. All admission procedures, however, must have been completed prior to their second registration.

THE MASTER OF SCIENCE—CHEMISTRY

This degree in chemistry is designed to prepare students for continuing their graduate studies to the doctoral level, or for employment in the more specialized areas of chemical industry. Courses may also be taken for self-improvement on a non-degree basis by those so inclined.

The Graduate School

The program is constructed to offer the student:

1. A broad advanced knowledge of the general field of chemistry;
2. Further training in the techniques of original chemical investigation.

Prerequisites

In all cases, the prerequisite for enrollment in the Graduate School is the possession of the baccalaureate degree. For entrance into the graduate program in chemistry, the applicant should have had undergraduate training in chemistry substantially equivalent to a Xavier undergraduate major. This normally consists of general chemistry (nine credit hours, and includes an introduction to qualitative inorganic analysis), quantitative analysis (four credit hours), organic chemistry (eight credit hours), chemical literature (one credit hour), physical chemistry (seven credit hours), qualitative organic analysis (three credit hours), intermediate organic (two credit hours), instrumental analysis (four credit hours), intermediate inorganic (three credit hours), and senior thesis (two credit hours).

Undergraduate prerequisites also include mathematics through calculus and a year of physics (eight credit hours). A student seriously deficient in these prerequisites will be required to make up the deficiency prior to, or concurrent with, his graduate studies.

Program

All candidates for the degree of Master of Science in Chemistry must complete the following nine courses. These are offered on a two-year cycle, but the program can be entered in any semester (excluding summer). The sequence of courses is described in the chemistry department brochure. For descriptions of the courses see listings under the Department of Chemistry.

- Ch 209. ORGANIC STEREOCHEMISTRY. Two credit hours.
- Ch 224. REACTION MECHANISMS. Three credit hours.
- Ch 228. STRUCTURAL INORGANIC CHEMISTRY. Two credit hours.
- Ch 240. CHEMICAL KINETICS. Two credit hours.
- Ch 242. THERMODYNAMICS. Two credit hours.
- Ch 245. THE CHEMICAL BOND. Two credit hours.
- Ch 256. CHEMICAL SEPARATIONS. Two credit hours.
- Ch 258. CHEMICAL MEASUREMENT. Two credit hours.
- Ch 262. INSTRUMENTAL METHODS. One or two credit hours.

A full-time student must also register for Ch 200: Chemistry Seminar, each semester of his attendance.

The Graduate School

In addition to the above block of required courses, the graduate student selects from available optional courses sufficient offerings such that his total number of credits in course work totals at least 24. With the permission of the chairman of the department, some 100 level courses may be included.

In his selection, the student is guided by the department chairman, or, after selection of his research topic, by his research advisor. Among the optional courses which are offered regularly are the following:

- Ch 160. BIOCHEMISTRY. Three credit hours.
- Ch 180. INTRODUCTION TO RADIOCHEMISTRY. Two credit hours.
- Ch 212. HETEROCYCLIC ORGANIC CHEMISTRY. Two credit hours.
- Ch 214. ORGANOMETALLIC CHEMISTRY. Two credit hours.
- Ch 248. INTRODUCTION TO VIBRATIONAL SPECTROSCOPY. Two credit hours.
- Ch 274. ADVANCED BIOCHEMISTRY. Two credit hours.
- Ch 276. MEDICINAL CHEMISTRY. Two credit hours.
- Ch 280. SPECIAL TOPICS. Two credit hours each semester.
- Ch 281. SPECIAL STUDY. One credit hour each semester.

Quantitative Requirements

A minimum of 30 hours is required for the degree of Master of Science in Chemistry. These shall ordinarily be distributed as follows:

1. Eighteen credit hours in the nine required graduate chemistry courses specified in the previous section entitled Program.
2. Sufficient credit hours in optional courses such that the total number of course hours is at least 24. With the permission of the chairman of the department, one 100 level course in chemistry and certain 100 and/or 200 level courses in mathematics and physics may be included.
3. Six hours of credit obtained through the satisfactory completion of a Master's research problem, submission of a written thesis, and the passing of an oral examination on the contents of the thesis.
4. The satisfactory completion of a written examination in a scientific modern language (chemical German, Russian, or French).
5. For full-time students, enrollment in Ch 200: Graduate Seminar, each semester of attendance. Part-time students are encouraged to attend the seminar whenever their schedules permit.

The Graduate School

Registration Procedure

Registration for graduate chemistry courses is through the office of the Graduate School. All *degree students* must present at the time of registration a schedule of courses to be taken which has been approved by the chairman of the chemistry department or the student's thesis advisor.

Non-degree students are encouraged to consult with the chairman of the chemistry department prior to registration to determine if they possess the proper prerequisites for the course(s) of interest.

THE MASTER OF SCIENCE—MATHEMATICS

The programs of studies leading to a Master of Science Degree in mathematics are designed to allow the students to specialize in theoretical mathematics, in general applied mathematics, or in a particular area in applied mathematics. The concentrations available are Operations Research, Physics-Engineering, and Probability-Statistics.

Courses are offered primarily in the late afternoon and evening to accommodate part-time as well as full-time students.

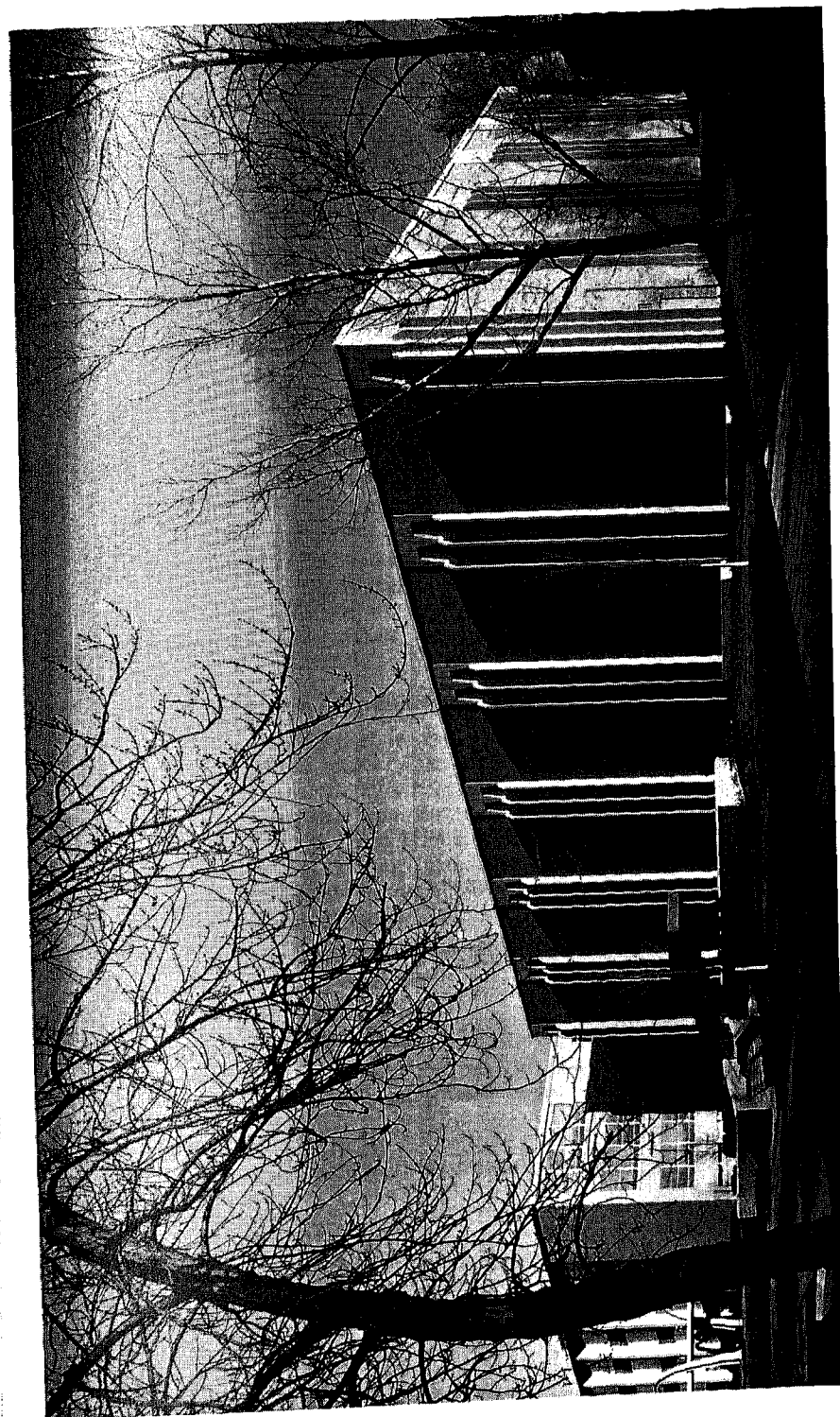
For those who cannot attend during the academic year, requirements for the degree may be completed during summer sessions only. Courses will be offered in a five-summer cycle, and will cover material useful in teaching mathematics in high school or college.

Prerequisites and Required Courses

Before being admitted to the program, students must have completed the equivalent of at least six semester hours of Advanced Calculus-Differential Equations. In addition, there is a basic set of courses required for the Master of Science in Mathematics. These are:

- Mt 144. MATRICES AND VECTOR SPACES
- Mt 158. INTERMEDIATE ANALYSIS
- Mt 159. INTRODUCTION TO COMPLEX VARIABLES
- Mt 181. ELEMENTARY TOPOLOGY

These courses must be completed as soon as possible. They are required for graduation and are prerequisites for many courses in the program. The consent of the Chairman of the Department of Mathematics is necessary for any of these courses to be applied toward the graduate requirements for the degree. In general, at most two of the courses will be applicable. (Students with an extensive undergraduate mathematics background might apply more than two of these required courses toward the Master's degree requirements.)



Requirements

As soon as possible after admission to the Graduate School, the student should choose an advisor. Upon completing six graduate credit hours at Xavier, he must apply for candidacy. At that time he should submit a program of courses to his advisor.

Students may elect to fulfill requirements for the Master of Science in mathematics under Plan A or Plan B. Both require thirty semester hours of graduate credit.

Plan A: Twenty-four semester hours of class work, six semester hours awarded upon completion of an acceptable thesis, demonstration of a reading knowledge of a foreign language, and a final comprehensive examination.

Plan B: Thirty semester hours of class work, a research paper, and a final written comprehensive examination.

At least half of the credit hours must be at the 200 level. Requirements for the degree must be fulfilled within five calendar years after one has earned six graduate credit hours at Xavier. With the consent of his advisor, the student may take a maximum of six hours in a cognate field.

Comprehensive Examination

The specialization in theoretical or applied mathematics is specified by the student's choice of a comprehensive examination given in two parts. Part I, common to all areas of concentration, is based on material from the four basic required courses, Mt 144, 158, 159, and 181. Part II is directly related to the student's field of specialization. He may choose to take this part of the comprehensive examination in one of the following areas:

1. Theoretical Mathematics
2. General Applied Mathematics
3. Operations Research
4. Physics-Engineering
5. Probability-Statistics

A detailed description of the material to be covered may be obtained from the Mathematics Department.

Concentration

These courses are offered regularly in the various areas of concentration:

Theoretical Mathematics

- Mt 145. INTRODUCTION TO MODERN ALGEBRA
Mt 244,
245. MODERN ALGEBRA I AND II

The Graduate School

- Mt 250, 251. REAL ANALYSIS I AND II
 Mt 252, 253. COMPLEX ANALYSIS I AND II
 Mt 280, 281. GENERAL TOPOLOGY I AND II

General Applied Mathematics

Courses may be taken from any of the areas of concentration or from the general Applied Mathematics offerings listed below.

- Mt 100. COMPUTATIONAL MATHEMATICS
 Mt 128, 129. NUMERICAL ANALYSIS I AND II
 Mt 132. NUMERICAL LINEAR ALGEBRA
 Mt 133. NUMERICAL METHODS OF NON-LINEAR SYSTEMS

Operations Research

- Mt 120. OPERATIONS RESEARCH
 Mt 140. LINEAR PROGRAMMING
 Mt 220, 221. ADVANCED OPERATIONS RESEARCH I AND II
 Mt 240, 241. ADVANCED OPTIMIZATION TECHNIQUES I AND II

Physics-Engineering

- Mt 151, 261. PARTIAL DIFFERENTIAL EQUATIONS I AND II
 Mt 155, 265. ADVANCED ORDINARY DIFFERENTIAL EQUATIONS I AND II
 Mt 177, 277. VECTOR AND TENSOR ANALYSIS I AND II
 Mt 272. INTEGRAL EQUATIONS
 Mt 273. CALCULUS OF VARIATIONS

Probability-Statistics

- Mt 124, 125. MATHEMATICAL STATISTICS I AND II
 Mt 224. DESIGN OF EXPERIMENTS
 Mt 225. APPLIED REGRESSION ANALYSIS
 Mt 226. STOCHASTIC PROCESSES
 Mt 227. STATISTICAL DECISION THEORY

A student need not take all the courses offered in his area of concentration, but he should take a sufficient number to be prepared for the comprehensive examination in it. With the exception of the four basic required courses, this is the only condition imposed on selection of courses.

THE MASTER OF SCIENCE—PHYSICS

The graduate program in physics is designed to facilitate creative mathematical exploration by student and teacher together into the way of the natural working of the world. Courses and research are primarily selected to provide an integrated master's program in theoretical physics with principal emphasis on classical analytical mechanics, relativistic electrodynamics, and quantum theory.

Research in the program reflects this emphasis on theory, the experimental equipment of the Physics Department being selected primarily for its high pedagogical utility. Experimental research work may be included in the graduate program in those instances where available equipment permits examination of phenomena having crucial theoretical significance. Topics in theoretical physics currently under investigation include: significance of electromagnetic potentials, extension of quantum behavior, general problems of recurring phenomena, dimensionality as physical variable in the hierarchy of interaction geometries, collective aspects of metastability, and the role of measurement in the foundations of quantum physics.

Full-time students may complete requirements for the Master of Science degree in one calendar year. Course offerings are scheduled evenings and Saturdays to allow those engaged in teaching, industrial, or defense work to complete degree requirements on a part-time basis, taking one or two courses a semester.

Undergraduate Prerequisites

Prospective graduate students in physics must ordinarily submit evidence of a baccalaureate degree and a satisfactory performance record in undergraduate physics and mathematics courses comparable with those taken by a physics major at Xavier University. Personal interviews, letters of recommendation, scores on the Miller Analogies Test and the Graduate Record Examination Aptitude and Achievement Tests are given due consideration. Upon recommendation of the student's advisor and approval of the Dean of the Graduate School, up to six hours' credit may be granted for graduate work satisfactorily completed at other institutions.

The Chairman of the Physics Department, or an advisor designated by him, should be consulted by each full-time student before registration and by each part-time student before completing his first six hours of work. The student should secure a precise statement concerning any undergraduate deficiencies at that time. His schedule for each subsequent registration must be approved in advance in writing by his advisor.

Requirements

Students may elect to fulfill requirements for the Master of Science in Physics under Plan A or Plan B. Both require thirty semester hours of graduate credit.

Plan A: Twenty-four semester hours of class work, six semester hours awarded upon completion of an acceptable thesis, demonstration of a reading knowledge of a foreign language, and a final oral comprehensive examination.

Plan B: Thirty semester hours of class work, a research paper, and a final written comprehensive examination.

Program of Studies

The distinctive nature of the Xavier graduate program in theoretical physics requires that all students elect the following three principal courses (15 graduate credit hours). For descriptions of courses see listings under the Department of Physics.

Ph 210. CLASSICAL ANALYTICAL MECHANICS. Three credit hours.

Ph 220, RELATIVISTIC ELECTRODYNAMICS. Six credit hours.
221.

Ph 230, QUANTUM MECHANICS. Six credit hours.
231.

In addition to these basic courses the graduate student electing Plan A must present nine additional class hours and six credit hours for his master's thesis; those electing Plan B must present fifteen additional class hours and a research paper. These additional hours, upon approval of the student's advisor, will be selected from other courses in physics as offered or from supporting courses offered by other departments such as Mathematics, Chemistry, or Biology.

THE MASTER OF EDUCATION

The degree of Master of Education, a professional degree, is designed to meet the needs of teachers and school administrators actually engaged in school work. It has one basic aim: stimulating better teaching wherever the influence of the successful candidate may extend, whether it be in an individual classroom, an entire school, or a whole school system.

Accordingly, this degree is awarded to the candidate who has demonstrated a capacity for improving the quality of teaching within the particular sphere of his influence by satisfactorily completing a program of graduate work designed to give him these characteristics:

1. Broad knowledge of the principles and techniques of education in modern society.
2. Specific knowledge of one major area of the field of education.
3. Essential understandings and skills necessary for intelligent consumption of educational research.

General Requirements

Requirements for the degree of Master of Education are specified with certain basic considerations in mind:

1. Sufficient flexibility is necessary to care adequately for the particular needs of the in-service educator who enrolls for the degree.
2. Graduate programs must be so planned as to insure the student's attaining a comprehensive knowledge of professional theory and practice in the principal areas of the field; a detailed knowledge of at least one major area of specialization—for high school teachers this area may be an appropriate academic field; and capability in the skills and knowledge necessary for intelligent comprehension and use of educational research.

Program

To insure comprehensiveness in their programs for the degree of Master of Education, all candidates must include in their programs each of four general survey courses designed, in their whole, to provide integrated coverage of the broad field of education. These courses are:

Ed 201. PHILOSOPHY OF EDUCATION. Three credit hours.

Ed 203. EDUCATIONAL PSYCHOLOGY. Three credit hours.

Ed 205. EDUCATIONAL ADMINISTRATION. Three credit hours.

Ed 207. EDUCATION RESEARCH. Three (two/one) credit hours.

To insure their mastery of a particular area of education, all candidates must include in their programs a concentration of at least twelve credit hours in one of the following *areas of concentration*:

Administration

A concentration in Administration must include Ed 241: Administration of the Elementary School, or Ed 242: Administration of the Secondary School, Ed 243: Supervision of Instruction, and either Ed 211: Elementary Curriculum or Ed 221: Secondary Curriculum. To complete at least twelve hours of concentration, students may select such courses as School Public Relations, School Law, School Finance, School Buildings, Tests, Guidance, or Counselling (Ed 131, 232, 233).

The Xavier M.Ed. degree with a concentration in administration satisfies Ohio requirements for provisional certificates as elementary principal; as secondary principal if Ed 232: Educational and Vocational Guidance is included; as supervisor if both Ed 211: Elementary Curriculum and Ed 221: Secondary Curriculum are included; and as

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executive head if both courses in curriculum and two of these three courses are included: Ed 275: School Law, Ed 276: School Finance, and Ed 277: School Buildings.

For the Xavier sixty hour program for superintendent and for permanent administrative certification in Ohio, request requirements from the Graduate School office.

Guidance

A concentration in Guidance is designed to prepare the student for counselling or school psychologist work. Proper selection of courses will also help the student prepare for personnel work in industry or in the armed services. Students must include Ed 131: Psychological and Achievement Tests, and Ed 233: Counselling Principles and Techniques. To complete twelve hours of concentration, one may choose from any of the psychology courses (abnormal, dynamic, social, adolescent, etc.), Individual Tests of Intelligence, Remedial Reading, Guidance Laboratory, etc.

For certification in Ohio as a school counsellor, one must fulfill specific requirements. See M.Ed. folder available in the office of the Graduate School.

Elementary and Secondary Education

Concentrations in these areas may include courses in current problems, administration, and curriculum at the particular level. Work in remedial reading, child or adolescent psychology, basic skills, and audio-visual aids may also be selected as appropriate. Students whose interest lies in teaching at the secondary level should consider carefully whether their needs would be better served by work in a subject matter area rather than in the more professional courses in secondary education.

School Psychologist

Ohio course requirements for the school psychologist program may be met either through an expanded M.Ed. program with concentration in psychology or through the M.A. program in psychology. (See M.A. folder for requirements.) Required courses are Ps 177, 178: Theories of Personality I, II; Ps 131: Psychological and Achievements Tests; Ps 138: Statistical Techniques, or 214: Advanced Statistics; Ps 237: Individual Tests of Intelligence; Ps 245, 246: Projective Techniques I, II; Ps 233: Counselling Principles and Techniques, or 265: Counselling and Psychotherapy; Ps 284: Role and Function of School Psychologist; and approved electives in human development and the psychology of learning to complete 24 graduate hours. A school year's internship (12 hours) is also required.

Students must secure written acceptance to the School Psychology program from the director of the program.

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M.Ed. students should apply after completing the survey courses (Ed 201, 203, 205, 207) and the following: Ps 131, Ps 138 of Ps 214, Ps 177, 178, and Ps 233 or Ps 265. It is suggested that M.Ed. students who do not have at least an undergraduate minor in psychology complete the M.Ed. with a concentration in psychology or guidance before applying for admission to the School Psychologist program. M.A. students should consult with the director prior to initial registration.

Educational Research

A new concentration in the M.Ed. program for Administrative Specialists in Educational Research is available. Under a recent federal grant the program will provide fellowships for research specialists. It is expected that additional grants will be available in future years. Details of the program have been cooperatively arranged with the Southwestern Ohio Educational Research Council (SWOERC), the University of Cincinnati, The University of Dayton, and Miami University.

The concentration includes Ed 138: Statistical Techniques, or 214: Advanced Statistics; Ed 208: Data Processing and Computer Techniques; Ed 285, 286: Internship in School Research (12 hours). Fellowships provide \$2,400, allow up to \$1,500 for dependents, and exempt from tuition and fees.

A special announcement of this program is available.

Physical Education

A concentration in the general area of physical education, health education, and recreation is offered on Saturdays and in the Summer Sessions. Forming this concentration are such three-hour courses as Ed 290: Administration of School Athletics; Ed 291: Leadership in Outdoor Recreation; Ed 292: Administration of Intramural Athletics; Ed 293: Facilities for Physical Education, Health, and Recreation; Ed 294: Physical Education for the Handicapped; Ed 295: Administration of Community Recreation; Ed 296: Administration of Physical Fitness Programs.

The Emotionally Disturbed Child

This concentration must include Ed 118: Introduction to the Emotionally Disturbed Child, Ed 119: Guiding the Emotionally Disturbed Child, Ed 152: Psychology of Delinquency, and Ed 220: Clinical Studies: Emotionally Disturbed Child; and at least two other courses selected from Abnormal Psychology, Mental Hygiene, Social Psychology, Differential Psychology, Psychopathology, and Child or Adolescent Psychology.

Montessori Education

This concentration will include Ed 252: Montessori Education: Psychological Bases; Ed 253: Montessori Education: Historical,

Theoretical, and Developmental Aspects; Ed 254: Montessori Methods and Materials: Sensory Level; and Ed 255: Montessori Methods and Materials: Abstract Level. Also available are Ed 257 and 258: Montessori Education: Internship I and II. All are three hour courses. A folder on this concentration is available upon request.

Business, Chemistry, Classics, Economics, English, History, Political Science, Mathematics, Philosophy, Physics

Concentrations in the subjects listed above, in which the University offers Masters' degrees, are always available. For the prospective college teacher, the Master's degree in a subject area is usually necessary. For the teacher at other levels, especially at the high school level, there is much to recommend the Master of Education with a concentration in a subject area. The teacher deepens his knowledge of the broad field of professional education through the surveys, and may elect up to eighteen hours (or two-thirds of the class requirements) of the Master of Arts, Master of Science, or Master of Business Administration in his subject. He may do this even though he does not meet the subject matter prerequisites for the other degrees. His course selections may be at either the strictly graduate level (200 series) or the advanced undergraduate-graduate level (100 series).

Music

By special arrangement with the College-Conservatory of Music of the University of Cincinnati, teachers may transfer up to twelve graduate credits as their M.Ed. concentration to Xavier.

Communication Arts

Designed primarily for students who did not concentrate in this field as undergraduates, the concentration in communication arts may include such courses as CA 100: Persuasion; CA 101: Oral Interpretation; CA 109: Art of the Film; CA 116: Educational Television; CA 117: Audiovisual Communication; CA 120: Survey of Mass Media; CA 122: Communication Theory; CA 123: Social Dynamics of Communication; CA 130: Speech Disorders; CA 140: History of the Theater; CA 170: Principles of Journalism; CA 181: Public Relations in Modern Society; CA 191: Creative Thinking; En 101: Advanced Writing; En 103: Creative Writing.

Biology

Two appropriate biology courses are offered each summer at the 100 course level. Prerequisite: Eight hours of college biology. Enough different biology courses are available over three summers for a student to secure a twelve-hour concentration in this field.

Chemistry for High School Teachers

Students who wish to develop a teaching field in chemistry will find a cycle of courses forming a concentration in a three-summer session sequence: Ch 201: Organic Chemistry for Teachers; Ch 202: Theoretical Chemistry for Teachers; Ch 203: Inorganic Chemistry for Teachers; Ch 204: Chemical Research for Teachers. One year of modern college chemistry, prerequisite to beginning this cycle, is also offered in certain summers. The four required education courses are taken before or after the chemistry depending on whether the student enters the program in the summer in which Ch 201 is scheduled. Students with strong undergraduate backgrounds in chemistry will find adequate offerings each summer for advanced work for a chemistry concentration.

Modern Languages

Advanced *upper division* courses in French, German, and Spanish are regularly offered in the Summer Sessions and in the late afternoons during the academic year to allow students to complete a concentration in one of these languages.

Physics

A concentration in physics is especially designed for teachers who have had at least one college year of general physics. Four three-hour courses will be offered in separate cycles on Saturday mornings and in Summer Sessions. Persons needing freshman physics may take this prerequisite in an eight-week summer session prior to entering the cycle.

Theology

Theology is becoming an increasingly popular area of concentration, especially for religious teachers. Each semester and during the summer Xavier offers appropriate courses numbered 100-199 applicable to this concentration.

Quantitative Requirements

A minimum of thirty hours is required for the degree of Master of Education. These shall be distributed as follows:

1. General surveys in education, twelve credit hours.
2. Concentration, twelve credit hours.
3. Pertinent electives, six credit hours.

Qualitative Requirements

The degree of Master of Education will be awarded only to candidates who have passed an extensive written examination on the general field of education as covered by the four survey courses and the individual's area of concentration.

THE MASTER OF BUSINESS ADMINISTRATION

The degree of Master of Business Administration is a professional degree designed to meet the needs of persons in industry for training which will ready them for increasing executive responsibilities.

Accordingly this degree is awarded to the candidate who has demonstrated capacity for leadership in the field of business by satisfactorily completing a graduate program designed to give him the following characteristics:

1. Broad knowledge of the principles and techniques of business administration.
2. Specific knowledge of one of the major phases of business administration.
3. Essential understandings and skills necessary for intelligent consumption of research in the fields of business.

Prerequisites

Students may be admitted to graduate work in business administration on either of these bases:

1. Undergraduate degree in business administration.
2. Undergraduate non-business degree, plus at least two full years of business experience, and 18 hours of course work in business subjects including accounting, economics, marketing, and statistics.
Undergraduate deficiencies may be removed by completing BA 200a, Basic Accounting (4 credit hours); BA 200b, Basic Economics (4 credit hours); BA 200c, Basic Marketing (2 credit hours); and BA 200d, Basic Statistics (2 credit hours), or their equivalents, as appropriate. These are special courses open only to graduate students with undergraduate deficiencies.
3. Undergraduate non-business degree with at least 30 hours of business and economics subjects. Deficiencies may be removed by an extended graduate program including BA 200a, b, c, and d (12 graduate hours as shown) and 6 additional hours as advised in individual cases.

Program

To insure comprehensiveness in their programs for the degree of Master of Business Administration, all candidates must include in their programs each of four general survey courses designed in their whole to provide integrated coverage of the broad business field. These courses are:

- BA 201. ECONOMICS OF BUSINESS. Three credit hours.
BA 202. QUANTITATIVE BUSINESS METHODS. Three credit hours.

BA 203. MANAGERIAL ACCOUNTING. Three credit hours.

BA 204. ADMINISTRATIVE OPERATION. Three credit hours.

To insure their mastery of a particular area of business administration, candidates will ordinarily include in their programs a concentration of at least nine credit hours in one of the following areas of concentration:

- Accounting* (Advanced Accounting Problems, Industrial Accounting, Taxation, Systems, Auditing Principles, Budgeting Procedures, Controllship, etc.)
- Personnel* (Collective Bargaining, Problems of Labor, Labor Legislation, Labor Economics, Industrial Psychology, Counselling Principles and Techniques, Psychological and Achievement Tests, Abnormal Psychology, Mental Hygiene, etc.)
- Management* (Production Management, Production and Quality Control, Executive Practices, Problems in Business Finance, Applied Economic Analysis, Small Business Operations, Investment Management, Office Management, Seminar: Management Planning, Quantitative Decision-Making.)
- Marketing* (Market Research, Marketing and Sales Analysis, Retail Merchandising, Advertising, Industrial Marketing.)
- Mathematical Economics* (Mathematical Statistics I and II, Econometrics, Mathematical Economics, Operations Research I and II.)
- Advanced Business Economics* (Applied Economic Analysis, Location of Business and Industrial Activity, Problems in Business Finance, Business Cycles, Business and Public Policy, Econometrics, Mathematics for Economists, Investment Management.)
- Hospital Administration* (See separate description below.)

Quantitative Requirements

A minimum of thirty graduate hours is required for the degree of Master of Business Administration. These shall ordinarily be distributed as follows:

1. Twelve credit hours in the four general surveys.
2. At least nine credit hours in the area of concentration.
3. BA 299: Seminar: Business Administration Problems, three credit hours.
4. The remainder, electives.

Qualitative Requirements

The degree of Master of Business Administration will be awarded only to candidates who have passed a written comprehensive examination on the general field as covered by the four core courses and the individual's area of concentration.

THE MASTER OF BUSINESS ADMINISTRATION— HOSPITAL ADMINISTRATION

The degree of Master of Business Administration with a concentration in Hospital Administration is awarded the candidate who has followed a program of studies designed to give him a background in two areas: first, in the principles and techniques used in the administration of businesses in general; and second, in those principles and techniques particularly applicable to the administration of hospitals.

Program

To accomplish the first objective, the candidate must include in his program the following three core courses required of all students for the degree of Master of Business Administration, with concentration in Hospital Administration. For course descriptions see Business Administration.

BA 201. ECONOMICS OF BUSINESS. Three credit hours.

BA 204. ADMINISTRATIVE OPERATION. Three credit hours.

BA 209. RESEARCH IN BUSINESS. Three credit hours.

To accomplish the second objective, the candidate must include courses designed to acquaint him specifically with the field of hospital administration. The following courses, constituting two-thirds of his program, are designed as six individual three credit-hour courses during the academic year, but are organized as three six-hour workshops during summer sessions:

Academic Year

BA 230. HOSPITAL ORGANIZATION AND ADMINISTRATION: PRINCIPLES. Three credit hours.

BA 231. HOSPITAL ORGANIZATION AND ADMINISTRATION: CASES. Three credit hours.

In summer these are organized as:

BA 232. WORKSHOP: HOSPITAL ORGANIZATION AND ADMINISTRATION. Six credit hours.

Academic Year

BA 233. HOSPITAL FINANCIAL MANAGEMENT. Three credit hours.

BA 234. HOSPITAL LAW AND HOSPITAL PURCHASING. Three credit hours.

In summer these are organized as:

BA 235. WORKSHOP: HOSPITAL BUSINESS MANAGEMENT. Six credit hours.

Academic Year

BA 236. HOSPITAL PERSONNEL ADMINISTRATION. Three credit hours.

BA 237. SEMINAR: HOSPITAL ADMINISTRATION PROBLEMS. Three credit hours.

In summer these are organized as:

BA 238. WORKSHOP: PERSONNEL ADMINISTRATION AND HOSPITAL PROBLEMS. Six credit hours.

Residency

Before receiving the degree of Master of Business Administration with concentration in Hospital Administration, all students must complete a twelve-month administrative residency in a hospital, unless specifically exempted in writing by the Director of the Hospital Administration program. Exception will be made only when the student evidences equivalent experience prior to enrolling in the degree program. While a student will ordinarily receive compensation from the hospital in which he serves his residency, a residency fee of \$200 is charged by the University to cover expenses of University administration of the program. Transcripts of students completing residency will carry a brief certification as to residency.

Quantitative Requirements

A minimum of thirty graduate hours plus the completion of the residency requirement is required for the degree of Master of Business Administration. These shall ordinarily be distributed as follows:

1. Nine credit hours in three general surveys.
2. At least eighteen credit hours in the area of hospital administration, exclusive of prerequisites.
3. The remainder, electives.

Qualitative Requirements

The degree of Master of Business Administration will be awarded only to candidates who have passed a written comprehensive examination on the general field as covered by the three core courses and the individual's area of concentration.

Undergraduate Prerequisites

Students may be admitted to graduate degree work in hospital administration on either of the two following bases:

1. Undergraduate degree which includes at least thirty hours of study in business subjects including six credit hours in ac-

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counting, three credit hours in statistics, and six credit hours in economics.

2. Undergraduate degree, at least two full years of hospital or general business experience and course work as follows: accounting, six credit hours; statistics, three credit hours; and economics, six credit hours.

Note—Undergraduate deficiencies may be removed by completing:

BA 200a. BASIC ACCOUNTING. Four credit hours.

BA 200b. BASIC ECONOMICS. Four credit hours.

BA 200d. BASIC STATISTICS. Two credit hours.

The above special graduate courses are not to be counted in the minimum of thirty graduate hours required for the degree.

Eligibility for Enrollment

Applicants for advanced study in the field of Hospital Administration must be well-qualified in terms of educational background, personal traits, motivation, abilities, and interest in the field.

Selection of applicants meeting the above criteria will be based on the potential benefits that the individual will receive from the program as indicated by his background, service to the profession, and academic prerequisites. Personal interviews with the director of the program are required for all applicants.

ADMINISTRATION OF THE GRADUATE SCHOOL

Throughout the academic year as well as the summer sessions, graduate courses are offered in business administration, chemistry, classical languages, education, English, history-political science, mathematics, philosophy (summers only), physics, and psychology. The Graduate School is open to men and women.

The Graduate Council encourages the registration of both *special students* and *degree students*. *Special students*, with the approval of the head of the department concerned, register for individual courses which they may pursue with profit, without regard to degree requirements. *Degree students* register with the express intention of following a program leading to a graduate degree.

Admission

Application for admission to graduate studies is made in form. Application forms can be had on request. Applications should be followed promptly by a transcript of applicant's credits.

Students electing graduate work leading to a master's degree must present evidence of having a bachelor's degree from an accredited institution, and also present official transcripts of his record from each college in which credit was obtained. Others will be registered conditionally.

An applicant with a bachelor's degree from a non-accredited institution is not admitted to full graduate standing until he has successfully completed at least six hours of graduate work with the required grades, and has been accepted by the department which controls his program.

Since graduate work is work done under direction, the chairman of the department of the student's major subject must decide on the student's preparation for graduate study in that department; and the chairman or one appointed by him will be the student's advisor throughout. The general prerequisites for graduate work in any department must be the equivalent of an undergraduate major at Xavier University.

Seniors of satisfactory academic standing who are within nine hours of completing their undergraduate requirements for the bachelor's degree may, in their last semester, register for graduate work.

Miller Analogies Test

All applicants for admission to the Graduate School will be required to take the Miller Analogies Test at Xavier University, or to bring with them an official report of their scores. Scores will aid the faculty in the guidance of the student.

Candidacy

Candidacy shall begin when, after the student's completion of six hours of graduate work, his application shall have been passed by the graduate council. Every student must make such application after completing six hours of work at Xavier and those thought unfit will be advised to discontinue their course.

No more than five years may elapse between candidacy and completion of work for the degree.

A student who attends only summer sessions may be granted a graduate degree provided he is engaged in work related to his major subject. This supposes that no more than five years shall elapse between his candidacy and the completion of his work.

Requirements

Thirty semester hours of graduate work will be demanded of an applicant for any of the above degrees. In the case of applicants for a Master of Arts or Master of Science degree, twenty-four hours of

such work will be devoted to fulfilling the course requirements and six hours to fulfilling the thesis requirement. Applicants for the Master of Education or Master of Business Administration degrees will devote the thirty hours to course requirements, as will applicants for the Master of Science in mathematics under Plan B and for the Master of Arts in English, economics, and in classics under Plan B.

For degrees requiring a thesis, familiarity with at least one foreign language is required for cultural background and use in research.

Distribution of the course requirements must be approved by the chairman of the department of the major subject. At least one-half of the courses taken must be fulfilled in that department. Candidates, however, for the Master of Arts and Master of Science degrees are advised to take all their work in their major department.

Character of the courses required is subject to the decision of the advisor. At least one-half the hours of credit in the major subject and one-half the total number of hours toward the degree must be obtained in courses numbered 200 or above, which are distinctly graduate courses.

Examinations

Candidates for graduate degrees shall be required to pass a final comprehensive examination, oral or written. This examination is oral in all programs requiring a thesis. It shall be the policy of the Graduate School to give these examinations three weeks prior to the end of the final semester. The head of the major department or one appointed by him shall be chairman of the examining committee and be responsible for the giving of the examination. The student must pass other examinations required by his major department.

The matter for the examination shall be based primarily on the student's courses and, if he is a candidate for the Master of Arts or Master of Science degree, on his thesis. It is understood, however, that a candidate's general knowledge of his field must be found satisfactory by his examiners.

Thesis

The thesis required for the Master of Arts or Master of Science degree should embody the results of the applicant's research in some problem of his major subject, and must at each stage be under the direction of the chairman of the department of that subject or of one appointed by him.

Before beginning work on the thesis, the student should secure from the Graduate Office the form, Approval of Thesis Project, and also the instruction, Form and Mechanics for Writing Theses.

The student must submit three typed copies of his thesis after it has been formally approved.

Application for Degree

All students planning to complete requirements for graduate degrees must complete application forms for the Graduate Office within the first month of their final semester of work—summers, during the first two weeks.

Graduate Grading System

The following symbols are used in the evaluation of course work: A—indicative not only of high achievement, but also of an unusual degree of intellectual ability and initiative; B—above average attainment; C—work of minimum or average attainment; D—inferior, no graduate credit; F—failure. To obtain credit graduate students must do work of B quality in courses numbered 100 to 199, and of C quality in courses numbered 200 or higher.

Probation

One unsatisfactory grade (below C in courses in the 200-series, below B in courses in the 100-series) places a graduate student on probation; two such grades make him ineligible to reregister in a degree program.

Clearance of Incompletes

Grades of I (incomplete) must be cleared by a student within four months after the last day of the semester, unless the professor concerned specifies another date. After four months, the grade becomes a permanent I.

Dismissal

The Graduate School reserves the right to dismiss from any graduate degree program any student whose quality of classwork is beneath the standard set by the Graduate Council of the University.

Transfer Credits

Students may be granted up to six hours of advanced standing for graduate credit transferred from other universities, provided the work was not in extension.

Health Service

Full-time graduate students may choose to avail themselves of the University's Student Health Service at the student fee of \$10.00 per semester.

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A student accident, sickness, and hospital insurance plan is available to full-time graduate students at a reasonable rate. Family policies are available to married students attending on a full-time basis.

Housing Arrangements

Graduate students usually make their own arrangements for obtaining housing accommodations. Dormitory accommodations are available to a limited number of male graduate students each semester, and generally available to all single graduate students, male and female, during the summer sessions. Assistance in obtaining off-campus accommodations may be obtained by writing the Director of Student Housing, Office of the Dean of Men.

Campus Parking

A limited amount of parking is available to graduate students on campus without charge. The Graduate School cannot guarantee a parking place as a condition of enrollment. Parking stickers, available without charge to graduate students who attend classes after 4 p.m. daily or on Saturday mornings are required on cars parked on campus.

Facilities for Study and Research

Computer Center: The University Computer Center operates an I.B.M. 1620 type computer which is available to all faculty and students of the University for either classroom work or research involving statistical or mathematical analyses. Members of the Computer Center also provide consultation and advisory assistance to those wishing to use it in their work.

Library: The University Library (including the Milford Branch) has a rapidly growing collection of more than 149,000 volumes which is selected to serve as well as supplement the education and research programs of the University. To bring the major areas of knowledge in close proximity, the divisional library plan has been established. The divisions are Humanities, Social Science, and Science and Business. Each area is staffed by librarians who are specialists in their fields. Within these divisions the volumes are arranged by subject on open shelves so that the intellectually curious student may browse among them, unhampered by intervening walls and artificial barriers.

Numerous departments of the University maintain departmental collections within their own buildings.

The graduate student is further encouraged in his studies by having available to him individual study carrels. Students wishing to keep books in the library may obtain a locker on an assigned basis.

Center for Human Development: The newly created Center for Human Development is engaged in research studies in the areas of

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guidance, reading improvement, and Montessori education as well as other areas within the Departments of Psychology and of Education.

Veterans' Education

The Graduate School has been approved by the Veterans' Administration for educational training under all existing public laws. Requests for information should be addressed to The Director, Veterans' Education.

Scholarships: Graduate School

Xavier University annually offers scholarships in all departments in which graduate programs are offered. These departments are business administration, classics, chemistry, economics, education, English, history-political science, mathematics, philosophy, and psychology. Two scholarships may be awarded in each department by the Graduate Scholarship Committee on recommendation of the chairman of the department concerned. Scholarships will be awarded only to those who have demonstrated real academic excellence in their undergraduate work. Scholarships cover tuition only and are valued at \$1,050 each.

Awards will be subject to the following requirements and procedures:

1. Scholarships will be awarded only to students prepared to do full-time graduate study with the exception that partial scholarships may be awarded in classics.
2. Only students who meet fully departmental requirements as outlined in the University Catalogue should apply.
3. Applications should be made by letter addressed to the Dean of the Graduate School, Xavier University.
4. Transcripts of all previous college work should be forwarded to the Dean of the Graduate School (one from each college attended).
5. At least two letters from educators who can evaluate the academic qualifications of the applicant should be forwarded directly to the Dean of the Graduate School by the writers.
6. Applications, letters, and transcripts for scholarships must be in the Graduate Office not later than April 1 and applicants will be notified of the decision of the Graduate Scholarship Committee during May of the academic year prior to the award.

Assistantships

The Walter A. and George McDonald Fund, established in honor of Mr. and Mrs. Andrew J. McDonald, provides income from a gift of \$50,000 for a graduate assistant in the Department of Chemistry.

A limited number of other graduate assistantships is awarded annually in the Departments of Business Administration, Chemistry, English, History, Mathematics, and Psychology. Assistants are expected to devote about half-time to graduate studies and about half-time to service in the department.

Letters of application should be addressed to the chairman of the department concerned. A complete transcript of the applicant's undergraduate record and letters of recommendation from the chairman of the applicant's undergraduate department and one other professor should be sent directly to the chairman of the department at Xavier University.

All letters of application, recommendation, and transcripts should be in the hands of the chairman concerned not later than April 1, and successful applicants will be notified ordinarily in April by the chairman concerned.

Lichter Foundation and Defense Act Loan Funds

Graduate students are eligible to participate in the Lichter Foundation Loan Fund after their first semester of residence. Amounts of loans from these funds are determined by the Committee on Scholarships on an individual basis.

Tuition and Fees

Matriculation (payable once).....	\$10.00
Tuition (per credit hour—graduate).....	35.00
Teachers and school administrators receive a special rate of.....	\$28.00
Laboratory science fee (per course per semester).....	10.00
Laboratory science deposit (per course per semester—partially refundable).....	10.00
Laboratory materials deposit for science thesis (payable once—partially refundable).....	50.00
Miller Analogies Test.....	4.00
Binding of thesis.....	4.00
Graduation fee.....	25.00

Contingent Fees

Special Examination.....	\$5.00
Duplicate Transcript.....	1.00

Financial arrangements should be settled on the day of registration. Attendance at classes will not be permitted until financial arrangements have been made with the bursar. A time payment plan is available. Consult the Bursar.

A \$3.00 service charge will be added to all accounts over \$250.00, and a \$1.00 service charge will be added to all other accounts.

This service charge will be deducted if full payment is made within one month of the first day of class in a given semester during the academic year or within ten days of the beginning of either summer session.

Withdrawal

Withdrawal from a course should be reported at once to the Dean of Graduate School by the student, in person or in writing. The date on which a withdrawal is reported to the Graduate Office by the student is the date used to determine possible refunds of tuition.

Refunds

The following is the official interpretation of University refund policy as applied to students of the Graduate School:

1. A refund of *tuition* (fees are not refundable) may be claimed in the case of withdrawal or dismissal in the first weeks of a semester according to the schedule detailed below.
2. Computation of refunds will be based upon the *official date of withdrawal*, not the last class attended.
3. The official date of withdrawal is the date upon which the student notifies the Graduate Office of his withdrawal, preferably in writing.
4. Withdrawal of a student who has been permitted to make only a partial payment at registration is handled precisely as it would have been had he completed payment; *thus he may owe a balance even though he has withdrawn.*

<i>Schedule of Refunds, Academic Year</i>	<i>Refund</i>
Before student's first class meets.....	100%
In first or second week from first day of semester.....	90%
In third or fourth week from first day of semester.....	80%
In fifth or sixth week from first day of semester.....	60%
In seventh or eighth week from first day of semester....	40%
In ninth week from first day of semester.....	20%
After nine weeks from first day of semester.....	None

Schedule of Refunds, Summer Sessions

For summer refund schedule, substitute "day" for "week" in the schedule for the academic year. For refund purposes one summer evening class equates with two summer day classes (*e.g.* withdrawal after the second evening class places the student within the "third or fourth day from the first day of the semester" category on the day Summer Sessions refund schedule and allows an 80% refund). No refund for evening classes is given after five class meetings.

Chronicle

Presidents

Year	President	Year	President
1831-34	Rev. James I. Mullan.	1881-84	Rev. John I. Coghlan, S.J.
1834-40	Most Rev. John Baptist Purcell.	1884-85	Rev. Henry Moeller, S.J.
1840-47	Rev. J. A. Elet, S.J.	1885-87	Rev. Edward A. Higgins, S.J.
1847-48	Rev. J. E. Blox, S.J.	1887-93	Rev. Henry Schapman, S.J.
1848-51	Rev. J. De Blieck, S.J.	1893-96	Rev. A. J. Burrowes, S.J.
1851-53	Rev. George A. Carrell, S.J.	1896-1900	Rev. Michael J. O'Connor, S.J.
1853-56	Rev. I. Boudreaux, S.J.	1900-07	Rev. Albert A. Dierckes, S.J.
1856-61	Rev. M. Oakley, S.J.	1907-11	Rev. Joseph Grimmelsman, S.J.
1861-65	Rev. John Schultz, S.J.	1911-16	Rev. Francis Heiermann, S.J.
1865-69	Rev. W. H. Hill, S.J.	1916-22	Rev. James McCabe, S.J.
1869-71	Rev. Thomas O'Neil, S.J.	1922-30	Rev. Hubert F. Brockman, S.J.
1871-74	Rev. Leopold Bushart, S.J.	1930-34	Rev. Hugo F. Sloctemyer, S.J.
1874-78	Rev. Edward A. Higgins, S.J.	1934-40	Rev. Dennis F. Burns, S.J.
1878-79	Rev. Thomas O'Neil, S.J.	1940-49	Rev. Celestin J. Steiner, S.J.
1879-81	Rev. R. J. Meyer, S.J.	1949-55	Rev. James F. Maguire, S.J.
1955-	Rev. Paul L. O'Connor, S.J.		

Intercollegiate English Essay Contest, 1967

Robert J. Thesing, Third Place

Intercollegiate Latin Contest, 1967

John F. Makowski, Second Place
Paul O. Kirley, Third Place

The Washington Oratorical Medal, Gift of the Alumni Association, 1967

Timothy M. Burke

The Verkamp Debate Medal, Founded by Joseph B. Verkamp, '77, 1967

Robert T. Joseph

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Jesuit Educational Association Colleges and Universities

ALABAMA

Spring Hill College, Mobile 36608

CALIFORNIA

Loyola University, Los Angeles 90045

University of Santa Clara, Santa Clara 95053

University of San Francisco, San Francisco 94117

COLORADO

Regis College, Denver 80221

CONNECTICUT

Fairfield University, Fairfield 06430

DISTRICT OF COLUMBIA

Georgetown University, Washington 20007

ILLINOIS

Loyola University, Chicago 60626

LOUISIANA

Loyola University, New Orleans 70118

MARYLAND

Loyola College, Baltimore 21210

MASSACHUSETTS

Boston College, Boston 02167

Holy Cross College, Worcester 01610

MICHIGAN

University of Detroit, Detroit 48221

MISSOURI

Rockhurst College, Kansas City 64110

St. Louis University, St. Louis 63103

NEBRASKA

The Creighton University, Omaha 68131

NEW JERSEY

St. Peter's College, Jersey City 07306

NEW YORK

Canisius College, Buffalo 14208

Fordham University, Bronx 10458

Le Moyne College, Syracuse 13214

OHIO

John Carroll University, Cleveland 44118

Xavier University, Cincinnati 45207

PENNSYLVANIA

St. Joseph's College, Philadelphia 19131

University of Scranton, Scranton 18510

WASHINGTON

Gonzaga University, Spokane 99202

Seattle University, Seattle 98122

WEST VIRGINIA

Wheeling College, Wheeling 26003

WISCONSIN

Marquette University, Milwaukee 53233

Wills and Bequests

Through the years, friends of Xavier University, by designating the University in their last wills, have expressed their appreciation for the devoted service and notable contributions made by the University.

Through a will, a friend of Xavier University can provide that the causes and ideals he or she has cherished in life will continue to enjoy support.

Gifts to the University may take the form of scholarships, of professorships, of additions to the material equipment, or of contributions to the permanent endowment fund. Special conditions may, of course, be attached to any gift.

Listed below is a Bequest Form which may be used to designate Xavier University in your will.

FORM OF BEQUEST

I, _____ hereby give, bequeath and devise to Xavier University, an institution incorporated under the laws of the State of Ohio, and located in Cincinnati, Ohio, the following:

_____ for the uses and purposes of the said Corporation.

(Signed) _____

(Date) _____

Witnesses:

"It is a bad will that has not the name of Our Lord among the heirs."—*Cardinal Manning*.

CHABANEL HOUSE
995 DANA AVE.
SODALITY HOUSE
776 NORTH CRESCENT
CLER CLUB HOUSE
792 NORTH CRESCENT

